BARRIERS TO WEIGHT-RELATED HEALTH BEHAVIORS: A QUALITATIVE COMPARISON OF THE SOCIO-ECOLOGICAL CONDITIONS BETWEEN PREGNANT AND POSTPARTUM LOW-INCOME WOMEN

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ABSTRACT

The association between socio-ecological factors and poor health outcomes for the low-income women and their children has been the focus of disparities research for several decades. Comparative qualitative studies have examined issues such as mood, body image, smoking and breastfeeding in both pregnant and postpartum women. This research identifies and compares the changing socio-ecological conditions among low-income women from pregnancy to postpartum and highlights the multitude of factors that may make women's lives increasingly difficult after delivery. This research may inform public health nutrition programs, such as Supplemental Food and Nutrition Program for Women, Infants and Children **(**WIC) program or Supplemental Nutrition Assistance Program (SNAP), as well as interventions that promote behavior change in low-income women during the pregnancy and postpartum periods.

As part of formative research for developing an online health intervention for pregnant and postpartum women between the ages of 18-35, group and individual interviews were conducted with pregnant and postpartum women who qualified for either WIC or PCAP (Prenatal Care Assistance Program). Five pregnancy group interviews (n=15 women, ranging from 2-5 women per group), five postpartum group interviews (n=23 women, ranging from 3-6 women per group) and seven individual interviews with a total of 45 participants were conducted in Rochester, NY. Group and individual interviews explored the influences on healthy behaviors including diet and physical activity during pregnancy and postpartum; experiences, strategies and barriers to change behavior; and the role of social support in supporting/discouraging healthy

behaviors. All group and individual interviews were audio-recorded. Detailed notes were taken and added in subsequent listening to the recordings. The constant comparative method was used to code group and individual interview notes and to identify emergent themes.

All of the women in the sample faced a great number of challenges that impacted their attitudes and beliefs, as well as, their ability to maintain or improve healthy behaviors. Such challenges included unemployment, relationship issues, minimal social support, lack of education, healthcare access, preexisting medical conditions and neighborhood disadvantage, including a poor food environment and criminal activity. Compared to pregnant women, postpartum women faced additional difficulties, such as child illnesses, child custody issues and homelessness. Many factors contribute to women's difficulties postpartum, including challenges that are present prior to delivery, those present prior to delivery that worsen after delivery, and some new challenges that begin after delivery.

The most striking differences between weight-related barriers during pregnancy and postpartum related to the family's medical issues and to greater environmental constraints. The socio-demographic constraints that low-income women face after delivery and the impact those constraints have on their ability to change health behaviors are critical to consider when designing health promotion interventions.

BIOGRAPHICAL SKETCH

Meredith Leigh Graham was born in Atlanta, Georgia but was raised in Southern California. In 1998, she was admitted to the Cornell School of Hotel Administration thinking that she'd run a vegetarian bed and breakfast after graduation. Her aspirations were not the best fit in the hotel school and in her second semester at Cornell she started taking basic science courses. To determine what major would be the best fit Meredith moved back to California and took courses at Aptos Community College in Santa Cruz, California and City College of San Francisco. In 2001 she returned to Cornell and to fulfill the requirements of a Human Biology, Health and Society major. She graduated with a Bachelors of Science in 2003 from the College of Human Ecology at Cornell University.

Meredith has worked for the Division of Nutritional Sciences at Cornell University since 2004 on various extension and research projects in Community Nutrition, including: Cornell Farm to School; Cooking Up Fun; Cornell NutritionWorks; and the Bassett Mothers Health Project. Meredith entered the employee degree program in 2005 in order to advance her research and outreach opportunities in Community Nutrition. She is currently the interventionist and study coordinator for the e-Moms of Rochester Healthy Pregnancy study, which is a large randomized controlled trial aimed at preventing excessive gestational weight gain and postpartum weight retention. e-Moms of Rochester is the largest research project and most diverse population that Meredith has worked on. Interacting with diverse participants in the formative research and now during the trial has been a particularly rewarding experience.

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LIST OF ABBREVIATIONS

BMI	Body Mass Index
PCAP	Prenatal Care Assistance Program
WIC	Supplemental Food and Nutrition Program for Women, Infants and Children
SNAP	Supplemental Nutrition Assistance Program

Introduction

More than two-thirds of American women are either overweight or obese, defined by having a body mass index (BMI) greater than 25 kg/m^2. Obesity in women is more prevalent in some types of people than others (1-3). Among U.S. women, obesity prevalence increases as income decreases (2). According to the 2009-10 National Health and Nutrition Examination Survey (NHANES), women who live in households with incomes at or above 350% of the federal poverty level are less likely to be obese compared to women who live in households that are below 130% of the federal poverty level (2). Non-Hispanic black women are more likely to be obese than white women (4). Using the NHANES data, 82% of Black women and 76% of Hispanic women are overweight or obese compared to 60% of White women (3). Low-income and minority women are more likely to be overweight or obese than higher income or Caucasian women.

Both pregnancy and becoming a parent, especially for the first time, are transitional periods that put women at higher risk for becoming obese later in life (5-15). Childbearing is associated with weight gain beyond that typical of aging, particularly when gestational weight gain is above that recommended by the Institute of Medicine (IOM) (6, 16-20). Excess gestational weight gain (12) and weight retention at 1 year are strong predictors of becoming overweight a decade or more later (15). The prevalence of excessive gestational weight gain is also higher than ever before, with more than 40% gaining greater than recommended (21, 22). Lower income and overweight women are at increased risk for excessive gestational weight gain compared to higher income

and normal weight women (23-26). In a meta-analysis Schmitt found a steep decrease in the amount of weight retained from 0 to 12 weeks postpartum and then a more gradual decline of amount retained up until one year after delivery and then an increase in weight retained one year after delivery (27). Weight retained a year or more after delivery cannot be explained solely by biological or physiological factors related to pregnancy given the decrease in weight after delivery and up until one year after delivery. It is likely that lifestyle and socio-demographic factors, which contribute to biological and physiological factors, relate why some women still retain weight or have gained weight a year or more after delivery (9, 10, 28, 29).

Multiple studies have identified and explained the significant barriers postpartum women face related to maintaining and/or improving overall health, mental health and healthy behaviors such as diet and physical activity (3, 30-46). In addition, researchers have recommended that additional programs and services be provided to postpartum women to address the significant barriers to optimal health that they face (45, 47, 48).

Qualitative research has been done with pregnant women related to various aspects of pregnancy, including smoking (5), weight gain during pregnancy (27, 49, 50), diet (51) and physical activity (52) and low-income pregnant women have frequently served as the population studied. Qualitative research has also been done with lower income postpartum women that has focused on smoking (53, 54), depression (55) and weight, diet and physical activity (43).

Several studies have qualitatively examined an issue with pregnant women and then examined that same issue with postpartum women and compared the differences

between the pregnant and postpartum women. The topics previously compared between pregnant and postpartum women are mood and body image (56), smoking (57) and breastfeeding (58). However, there has not been a study that qualitatively looked at weight-related behaviors in pregnant and postpartum women.

To reduce the likelihood of increasing BMI with the birth of each child through the multiple pathways that lead to postpartum weight retention and subsequently increasing weight, a better understanding of the role and influence of socio-ecological conditions experienced by low-income postpartum women is needed. This paper examines:

1. The socio-demographic constraints and priorities that impede healthy weight behaviors in low-income pregnant and postpartum women; and
2. The potential pathways through which socio-ecological conditions may impede or promote the capacity for healthy weight behaviors in the postpartum period for low-income women.

This research is relevant to the public health nutrition programs that serve pregnant and postpartum women such as the Supplemental Food and Nutrition Program for Women, Infants and Children (WIC) program and the Supplemental Nutrition Assistance Program (SNAP). It is also relevant for interventions that are promoting health behavior change in women during the pregnancy and postpartum period.

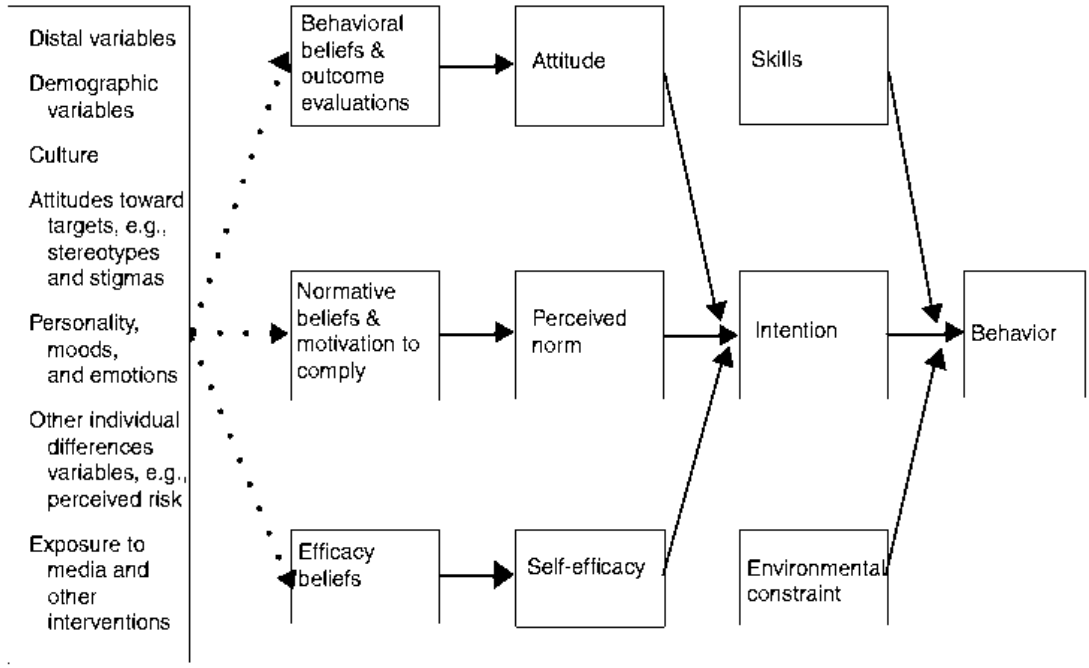
Literature Review

Theories

This research project was conducted to inform the development of an intervention for appropriate weight gain during pregnancy and prevention of postpartum weight retention. The guiding theoretical framework for the behavioral intervention was Fishbein and Yzer's Integrative Model of Behavioral Prediction (59). The model, which is included as Figure 1, states that behaviors are directly predicted by a strong intention to perform the behavior, in addition to an individual's skill level and environmental constraints. This model is focused on what impacts or predicts changing individual behavior, and while quite relevant for the development of the behavior change intervention, its scope is primarily centered on the individual and fails to include any systems or structural constructs. A conceptual model that includes structural constructs as well as individual predictors of behavior may be more relevant for low-income women during the childbearing years.

In Ryan et al's 2011 paper (60) looking at how the Theory of Integrated Behavior (59) applied to a weight self-management program there were significant associations between self efficacy and outcome beliefs in white women, but not a significant association in the African American women. As such for white women the pathway for weight self-management is significantly influenced by self-efficacy and outcome beliefs. Whereas in the African American women in Ryan's paper the pathways for weight self-management was not significantly influenced by self-efficacy and outcome beliefs.

Figure 1. An Integrative Model of Behavioral Prediction (59)



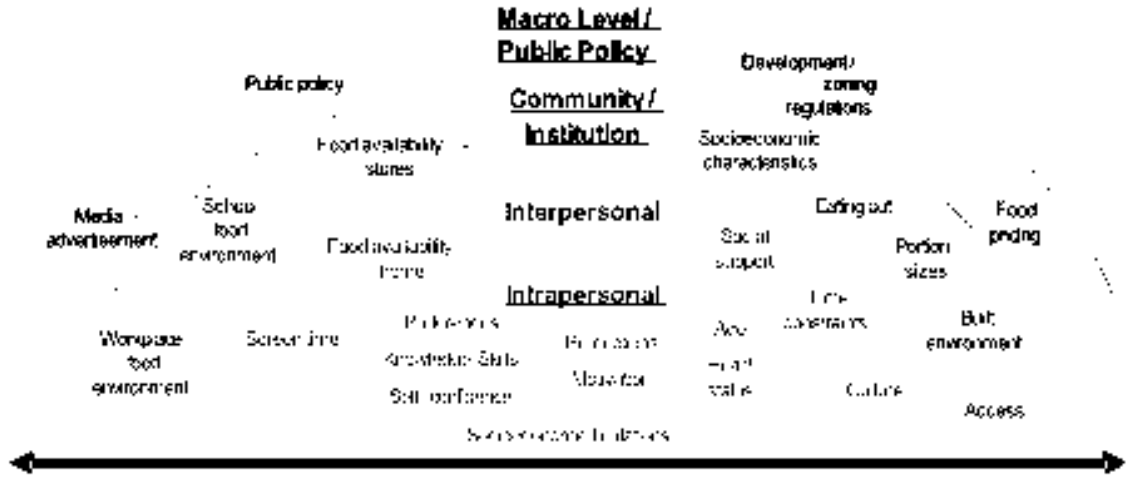
An ecological perspective is rooted in the interrelations among environmental conditions, human behavior and well-being (61). Relevant aspects of health promoting environments, such as aspects of healthfulness and environmental resources, and behavioral, psychological and physiological outcomes framed from this social ecological perspective on health promotion are shown in Table 1 (62). A major strength of an ecological approach to health promotion is that it integrates strategies of behavioral and environmental enhancement within a broad systems-theoretical perspective (63). The ecological approach to health promotion by Green and Kreuter (64) is widely used in public health research and interventions. In Figure 2 an ecological model of factors influencing diet and physical activity is included (65), which provides a framework that is helpful for considering the dimensions and criteria of health promoting behaviors that are detailed in Table 1.

Table 1. Dimensions and Criteria for Health Promotive Environments (62)

Facets of healthfulness	Environmental Resources	Behavioral, psychological, and physiological outcomes
Physical health	Injury-resistant design; ergonomically sound design; physical comfort, nontoxic & nonpathogenic environment	Physiologic health; absence of illness symptoms and injury; perceived comfort; genetic and reproductive health
Mental & emotional well-being	Environmental controllability & predictability; environmental novelty & challenge; low distraction; aesthetic qualities; symbolic and spiritual elements	Sense of personal competence, challenge & fulfillment; developmental growth; minimal experience of emotional distress; strong sense of personal identity & creativity; feelings of attachment to one's physical and social milieu
Social cohesion at organizational & community levels	Availability of social support networks; design and management processes; organizational flexibility & responsiveness; economic stability; low potential for intergroup conflict; health promotive media and planning	High levels of social contact and cooperation; commitment to and satisfaction with organization and community; productivity and innovation at organizational and community levels; high levels of perceived quality of life; prevalence of health promotive, injury-preventive & environmentally protective behavior

However, adherence to true systems theory is often lacking (66). Often there is a failure to design interventions within the context or setting into which the intervention will be introduced even though that setting, particularly for low-income women, is far more complicated than the design of the intervention itself (67, 68). Another way to think of this is that the socio-demographic conditions that accompany living close to the federal poverty line are frequently correlates of poor health behaviors and yet interventions are not often designed explicitly taking those socio-demographic conditions into consideration.

Figure 2. An ecological model of factors influencing diet and physical activity (65)



The next five sections outline the literature supporting: 1) why low-income women are at great risk for excessive weight gain during pregnancy and weight retention postpartum; 2) the barriers they face during pregnancy; 3) the barriers they face postpartum; 4) the programs and policies that impact them before and after delivery; and 5) a description of Rochester, NY.

Young Low-Income Women in the United States

The pregnancy and postpartum time periods are especially critical for changing behaviors to promote healthy weight management in low-income women (69). As of 2011, 16% of women in the United States are living below the federal poverty line (70). Women in their childbearing years are more likely than older women to be living below the federal poverty line (70). Disparities in the prevalence of obesity occur among childbearing women, with disproportionate obesity rates seen in low-income or minority women (71). Compared to women of average socioeconomic status, women with low socioeconomic status are less attentive about body weight, more tolerant of weight gain, and engage in fewer weight management practices (72). Low-income and minority

women are more likely to enter pregnancy overweight, gain excessively during each pregnancy, and fail to return to their pre-pregnancy body weight, which leads to increasing body fat and increased likelihood of becoming obese (15).

Barriers to Healthy Behaviors During Pregnancy Among Low-income Women

Research has previously shown that pre-pregnancy BMI, gestational weight gain, cigarette smoking, alcohol use, drug use, physically demanding work, access to quality of prenatal care, stress, anxiety and other psychosocial factors impact pregnancy outcomes (73). Using data from the United States between 1996-98, 25% of pregnant women between 18-44 years of age smoke cigarettes, 3% reported use of illicit drugs during pregnancy and about 15% drink alcohol during pregnancy (54). The prevalence of these risky and unhealthy behaviors and their greater likelihood within less educated, non-white, and unmarried women (54) makes drug, smoking and alcohol cessation higher priorities for intervention than weight management practices such as portion control, increasing fruit and vegetable intake and regular physical activity.

In focus groups, Kieffer et al. 2002 examined perspectives related to diabetes and physical activity with Latino women during pregnancy and postpartum. She found numerous social, cultural, and environmental barriers present, including household responsibilities that left them with little time or energy, lack of knowledge about how to exercise safely, social isolation, weather, and lack of access to safe facilities (74). In in-depth interviews by Thornton et al. with low-income Latino women that focused on weight, diet and physical activity beliefs, eating and physical activity patterns were influenced by cultural beliefs concerning safe and appropriate foods and physical

activity during and after pregnancy, as well as family routines such as eating out on weekends (75). Setse et al. conducted focus groups with pregnant African American women and their attitudes toward weight gain during pregnancy, barriers to postpartum weight loss and preferences for postpartum weight loss interventions (76). Depression, cost of weight loss programs, the negative impact of celebrities losing pregnancy weight immediately, unhealthy family food preferences and lack of child care were barriers for weight loss postpartum despite a strong desire to lose weight and knowledge of the adverse effects of obesity (76).

Barriers to Healthy Behavior Among Postpartum Low-Income Women

In her commentary in the Journal of the American Dietetic Association, Krummel 2007 writes:

> A first step in weight management in the postpartum period is to assess readiness, intention, and barriers to change. Because infant care can be overwhelming, women might not believe that they have the time or energy to commit to a weight-management program at this vulnerable time (69).

In a sample of overweight women who were participants in the WIC Program (n=151), 55% of women were in the action stage for weight loss (77). However, in that same article less than 40% of the women were in that action stage for any of the actual behavior changes, which were exercise, avoiding fat and eating more fiber were. In a recent study with black adolescent mothers ranging from 13.5 to 17.9 years of age at delivery, 44% of overweight participants intended to lose weight in the postpartum period (78). Despite this intention, the overweight women gained at a rate similar to

mothers who were of normal body weight postpartum. In a different low-income sample of postpartum women, perceived barriers to healthful eating increased from shortly after delivery to more than 12 months after delivery (79). These authors state that several barriers to healthful eating increased after delivery including cost of healthy foods, lack of time, and lack of understanding of nutrition.

Research has identified additional barriers to healthy behavior during the postpartum period, including low behavior specific self-efficacy for physical activity (33, 80), postpartum depression (76, 78, 81-83), neighborhood deprivation (57), smoking (54, 55, 84, 85), lack of social support (58, 83), breastfeeding (58, 86, 87), newborn care (58) and health insurance (76, 78, 82).

New mothers experience emotional and psychological stressors throughout the first year after delivery that alter their physical and emotional well-being and may limit their ability to engage in health promoting activities, such as healthy meal preparation and physical activity (88). At six months postpartum, Boothe et al. found that depression and living with a spouse were significant predictors of unmet social support for healthy behaviors in women who were overweight or obese before pregnancy (83). When looking at weight retention one-year after delivery Herring et al found that depression was related to the amount of weight retained (81). In Kanotra et al.'s examination of the comments from Pregnancy Risk Assessment Monitoring System (PRAMS,) postpartum women were most concerned about the following: needing social support; breastfeeding issues; lack of education about newborn care after discharge; postpartum depression;

perceived need for extended postpartum hospital stay; and need for maternal insurance coverage beyond delivery (58).

Programs and Policies That Impact Pregnant and Postpartum Women

Given the barriers faced by low-income women during pregnancy and postpartum and importance of this time on maternal and infant health, there are several programs that impact the health of lower income women. The following section provides a brief description of these programs. Expanded health care coverage during pregnancy is called PCAP (Prenatal Care Assistance Program) where insurance coverage is provided for women that have incomes less than 185% of the federal poverty line to ensure prenatal care. PCAP's insurance coverage lasts through delivery and ends around the 6-week after delivery visit.

Additional detail about the social service programs provided for childbearing women relates to the provision of food stamps, now known as the Supplemental Nutrition Assistance Program (SNAP). SNAP is available to households that have net incomes less than 100% of the federal poverty line and with the addition of a child for postpartum women compared to pregnant women the likelihood of receiving SNAP should be higher among postpartum women. The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) provides pregnant women, new mothers, infants and children that are in households at 185% of federal poverty line or less with nutritious foods and nutrition education. Similar to SNAP this program should likely be available to postpartum women that were eligible during pregnancy.

The Healthy Start Program provides pregnancy education classes, including nutrition education and stress management classes, as well as breastfeeding coaching to low-income women from nine zip codes in Rochester, NY. Mental health counseling was offered to low-income pregnant women and postpartum women up until 24 months after delivery. Lastly, job training and school placement was offered to postpartum women with children between 2 to 24 months old. Additional free services include: health education classes, parenting skill and infant care classes, quit smoking counseling, care management, and healthy relationship classes. While different services are available to pregnant and postpartum women through Healthy Start the stability of those services through the prenatal period to the postpartum period indicate that these women were able to still receive services after delivery.

Demographic Characteristics of Rochester, NY

Low-income women in the sample resembled the demographic composition of the city of Rochester while higher income women reflected the composition of Monroe County. Thirteen percent of individuals live below the poverty level in Monroe County, which is similar to the US overall, but that figure is more than doubled inside the city of Rochester at 29% (89). The racial and ethnic population distribution in Monroe County is 79% white, 14% African American, and 6% Hispanic compared to Rochester which is 49% white, 40% African American, and 14% Hispanic (90). From 1990-2000, the city's areas of high poverty increased (tracts with more than 40% of population living at federal poverty level) from 17 to 19 census tracts, affecting nearly 1/3 of Rochester's total population (91). In 2008-09, 85.9% of Rochester city school district students met

federal and state guidelines for living in poverty and the 2007-08 graduation rate for the district was 48% (92). Five neighborhoods in Rochester that are on the northern border of the downtown area have particularly concentrated poverty and are termed the Northern Crescent or the Crescent of Poverty. These neighborhoods and their associated zip codes are: Upper Falls (14604 or 14605), Marketview Heights (14605), Edgerton (14613), Brown Square (14608) and JOSANA (14608).

Summary

In order to effectively promote healthy eating and physical activity in childbearing low-income women, the challenges faced during pregnancy and postpartum need to be better understood and potential mechanisms for how those challenges influence health and health behaviors needs to be articulated. The literature provides information about the difficulties that pregnant and postpartum women have identified. In this study, qualitative data from a population of low-income women who were planning to deliver or did deliver a baby in Rochester, NY are used to develop a fuller understanding of conditions, constraints and priorities of these women and the potential pathways through which socio-ecological contextual factors influence health priorities and weight-related behaviors.

Methods

Overview of Data Collected

As part of the formative research for a large randomized controlled trial, we conducted structured pregnancy individual interviews, semi-structured pregnancy group interviews, semi-structured postpartum group interviews and structured postpartum

individual interviews. For this formative research, we included only women who were 18-35 years of age and lived in the greater Rochester, New York area. All individual and group interviews were conducted in English. Participants provided written informed consent. All study procedures were approved by the Institutional Review Boards of Cornell University, Unity Health System, as well as the Child Care Council, Inc. of Rochester.

The inclusion criteria was whether or not women were eligible for WIC and/or PCAP, which require that households be below 185% of the federal poverty level. Individual and group interviews were advertised through flyers at obstetrics practices, Child Care Council, Inc. of Rochester, and a local health and parenting program for low-income women. The group interviews were conducted within two categories of income. When women called to volunteer for the study, the researcher (M. Graham) classified participants as low-income or higher income based on whether or not women responded that they received WIC or PCAP. No other criteria were used to divide women into income categories.

For this research project, only the data collected from the low-income group interviews, pregnancy and postpartum, and the low-income postpartum individual interviews will be presented, analyzed and discussed. The results from the pregnancy group interviews have been published previously by Paul et al 2013 (93). The structured individual pregnancy interviews have not been included since those were focused on media usage and intervention tool preferences. There was only one participant who participated in multiple interviews, she was pregnant for the pregnancy group interview

had delivered and she also attended the postpartum group interview. Otherwise the samples for the pregnancy group interviews, postpartum group interviews, or postpartum individual interviews all used different individuals.

Group Interview Methods

In the spring of 2010, we conducted five group interviews with low-income pregnant women in Rochester, Monroe County, NY (n=15 women). Group A had five participants. Group B had two participants. Group C had three participants. Group D had three participants. Group E had two participants. The mean group size was 3 and the group size ranged from 2 to 5 participants. Pregnancy group interview topics included women's beliefs and behaviors around health; weight gain; diet, and physical activity during pregnancy. The pregnancy group interview guide is included in the appendix.

Between December 2010 and February 2011, we conducted five group interviews with low-income women who had delivered a baby within the last eighteen months and lived in Rochester, Monroe County, NY (n=23 women). Interview Group A had five participants. Group B had four participants. Group C had three participants. Group D had six participants. Group E had five participants. The average group size was between 4-5 and the range was from 3-6 participants per group. Postpartum group interview topics included women's beliefs and behaviors around health after delivery, priorities after delivery; weight loss and control of body weight; diet, and physical activity during the postpartum period; and experiences, strategies and barriers to behavior change. The postpartum group interview guide is included in the appendix.

In early 2011, we conducted seven structured individual interviews with low-income women who had delivered a baby in the last eighteen months. Postpartum interview topics included the presence of certain types of social support after delivery as well as the role of social support in supporting/discouraging healthy behaviors. The complete postpartum individual interview guide is included in the appendix.

The group interview guides were developed following the methods of Krueger (94). The group interviews lasted about an hour and a half and were hosted at either the Healthy Start Program, the Child Care Council, Inc. or at the Center for Community Health. For the group interviews hosted at the Healthy Start Program, transportation and daycare were provided by the center to encourage women to attend the group interview sessions. Regardless of location of the group interviews, each participant was given $40 in cash for attending.

For both the pregnancy and the postpartum group interviews, one researcher (M. Graham) moderated the discussions while another researcher (K. Paul) observed and recorded detailed notes on the women's responses, interactions, and physical appearances. Each group interview was audio recorded in case any responses that were missed could be filled in by listening to the audio recording afterward. The detailed notes captured as many of the verbatim responses as possible. Both M. Graham and K. Paul debriefed after each group interview to identify initial themes that were used in coding, according to the methods by Krueger (94, 95). According to Krueger 1994:

> Ideally, the moderator or assistant moderator should also do the analysis. These individuals have had firsthand exposure to each of the discussions, observed the

> interactions of all participants, and likely had the most intensive exposure to the problem at hand (pg. 153) (94).

As both researchers had firsthand exposure, K. Paul did the coding using the initial themes for the pregnancy and postpartum group interviews, and M. Graham did the coding using the initial themes for the postpartum individual interviews, then both researchers discussed and agreed on new themes. Then M. Graham proceeded with further coding of the low-income group and individual interviews. This method combines elements of note-based analysis and tape-based analysis as described in Krueger:

> Tape-based analysis involves careful listening to the tape and the preparation of an abridged transcript. This abridged transcript is considerably shorter than the typical 50-70+ page focus group transcript. This transcript contains comments that directly relate to the topic at hand plus the moderator's (or assistant moderator's) oral summary at the conclusion of the focus group. As a result, the abbreviated transcript may be 3-10 pages long. Note-based analysis relies primarily on field notes, a debriefing session and summary comments at conclusion of the focus group. The focus group is taped is used primarily to verify specific quotes and to transcribe the oral summary at the conclusion of the focus group. (pg. 143-4) (94)

Rather than utilizing a specific qualitative analysis program such as Atlas ti, the researchers found it more efficient to hand code and utilize a simple Excel spreadsheet for matrix building (96) and definition coding. The constant comparative method was

used to code individual and group interview notes and to identify additional emergent themes (97-99).

The initial purpose of the group interviews was a needs assessment for the development of an online intervention. As such, the group interview guides were designed to elicit input from pregnant and postpartum women to develop an appropriate gestational weight gain pregnancy intervention and a return to pre-pregnancy weight postpartum intervention. The interview guides were not specifically designed to identify barriers to weight related health behaviors. Themes about the women's beliefs and behaviors were initially categorized within the integrative model of behavioral prediction by Fishbein and Yzer (59), which was the guiding theory for the intervention being developed. The model states that behaviors are directly predicted by a strong intention to perform the behavior in addition to an individual's skill level and amount of environmental constraints. Intentions are in turn influenced by the set of behavioral beliefs (what outcome will occur if I do this behavior), normative beliefs (what do other people tell me is the right behavior), and efficacy beliefs (what do I believe I am capable of doing) that a person holds and values related to that behavior. The themes explored in detail as part of this particular research focus on how environmental constraints may directly impact behavior or how distal variables, such as demographic characteristics and culture, influence behavior by impacting behavioral beliefs, normative beliefs and efficacy beliefs. As themes emerged from this data, it became necessary to incorporate a theoretical framework that was more systems theory-oriented and less individual behavior change focused. Stokols social-ecological approach to health promotion (61)

provides a framework that encompasses the intrapersonal, physical environmental, organizational, and cultural constructs that account for the occurrence and prevalence of increasing weight through the child bearing years and also integrates the contextual factors that are likely to influence the effectiveness of interventions designed to promote weight management.

Methods for Structured Interviews

The individual interview guide was developed based on methods outlined by Creswell (100) and by Salant and Dillman (101). The postpartum individual interviews were conducted to better understand social support in postpartum women and to inform development of online social support tools for the postpartum intervention. The individual interviews, like the group interviews, were not specifically designed to identify barriers to weight related health behaviors.

The individual interviews lasted between twenty to forty minutes and were audio recorded. The interviews took place at the Center for Community Health. Neither transportation nor childcare was provided. Each participant was given $25 for attending the individual interview.

M. Graham conducted all of the interviews and simultaneously took notes during each individual interview. The detailed notes captured as many of the verbatim responses as possible. The audio recordings were used to fill in any responses that were missing. M. Graham did the initial coding of all of the interviews and then J. Cowan and M. Graham divided responsibility for further coding by splitting the number of interviews evenly. Both researchers discussed and agreed on new themes that

emerged from the individual interviews. M. Graham then proceeded with further coding of the low-income individual interviews based on the differences that had emerged between income categories.

Rather than utilizing a specific qualitative analysis program such as Atlas ti, the researchers found it more efficient to hand code and utilize a simple Excel spreadsheet for matrix building (96) and definition coding. The constant comparative method was used to code individual interview notes and to identify additional emergent themes (97-99).

The Constant Comparative Method for Groups and Individual Interviews

The interview guide questions that were examined as part of this analysis focused on the priorities of low-income women, barriers and enablers for behavior change, and social support for priorities. There were many other types of questions asked during the group and individual interviews. The complete interview guides are included in the appendix. Those included in Table 2 are the questions that led to participants discussing the barriers that they face related to healthy weight related behaviors. The specific questions that were asked are shown in Table 2.

Table 2. Interview Guide Questions

Section	Question
Health and Priorities	1. What are some of the things you are thinking about more now that you are pregnant? 2. Considering all of these priorities, how would you rank your health among all of these things? 3. What does it mean to you to be healthy during pregnancy? 4. You've added a new person to your family. How, if at all, has that changed your life and your priorities? 5. Thinking back to the priorities that we talked about initially, where does your personal health fit in among these priorities? 6. What are your major priorities when it comes to your health? What about your priorities for your baby's health? 7. How have you dealt with your personal health priorities since you had your baby? For those that have turned attention to them: When did you start working on them? For those that have not yet turned attention to them: When do you think you will start trying to work on them? Why then? 8. Did you make any changes during your pregnancy to be healthier? Are you still doing those things? Why or why not?
Behavior change	1. Think about a time when you have made a change or think about a change that you might want to make in the future. 2. What made you or is making you decide to try these things? 3. What sort of things made it difficult to make the changes you did? 4. What sort of things helped you or would help you make this change?
Social Support	1. Do you have any friends or family with children the same age that are going through some of the same stuff that you are? Tell me a little bit about that. 2. Who do you rely on when you need help with these priorities or other things in your life? 3. How have the people or the ways that people help you changed since you had a baby?

The constant comparative method, as described by Boeije (98), served as the guide for the step by step analysis. First, each individual or group interview was coded and compared within itself, which was the initial/open coding that was done. Matrices were built with each row as an individual interview or group interview. Each row was

completed and responses were compared within that row before moving on to the next row. In this analysis, each individual interview is a row and each group interview is a row. Separating each participant in a group interview into a row was not feasible given the way the data were collected.

Next, all pregnancy group interviews were compared to each other, all postpartum group interviews were compared and then all postpartum individual interviews were compared to each other. In this axial coding step, fragments from different individual and group interviews were compared and the researcher determined those dealing with the same theme. By looking at the matrices for a particular data collection activity, pregnancy group interview in the example above, themes were identified in the pregnancy time period, the postpartum period, and both the pregnancy and the postpartum periods.

Then the postpartum individual and group interviews were considered as a group and they were compared to the pregnancy group interviews. In this step, axial coding continued and the discovery of which combinations of codes existed within the data began. As a result of this step, a list of code categories was created with an indication of which group interview(s) or individual interview(s) the code category emerged from. The complete table is included in the appendix.

At this point in the analysis M. Graham re-listened to the original audio of the group and individual interviews that had code categories associated with them. The purpose of this particular step was two-fold: to add depth and description of the code categories beyond what the matrices could include for drafting internal memos and to

gather illustrative quotes of particular code categories that appeared to be emergent themes. The memos were used to make sense of the data beyond code categories to reach a theoretical proposal about those code categories. Those memos, which included reflexivity by the researcher, examining the context of the research and other important aspects of the discussions that were then used to develop theory and major themes, which are presented in the results.

Results

Sample Characteristics

For this analysis, we combined data from the group interviews and individual interviews with a total of 45 low-income women, 18 (40%) of the women were having/had their first child and 27 (60%) of the women were having/had their second, third, etc. child. For the postpartum women who had a baby in the last 18 months, two of them were pregnant again at the time of the group interviews and are included in the analysis. Of the 45 women in the combined pregnancy and postpartum sample, the following race and ethnicities were observed, 34 (76%) were African American, 11 (24%) were Caucasian and 8 (18%) were of Hispanic ethnicity. The women ranged from 18 to 35 years of age. The women in the sample closely resembled the demographic composition of the city of Rochester where 31% of individuals live below the federal poverty level and where 44% of individuals are Caucasian, 42% are African American, and 16% are Hispanic (102). It is likely that the proportion of racial and ethnic minorities in the low-income population is higher than in the general population as illustrated by the statistics for poor children in Rochester. Of children living below the federal poverty

line in the city of Rochester from the American Community Survey 2007-2011, 29% of the children living below federal poverty were Hispanic and 59% were African American or Black (89). About the same number of women had a normal body mass index as those who were overweight or obese, with 22 normal BMI women and 23 overweight/obese BMI women in the sample. Women in the pregnancy discussion groups were of similar income, race and ethnicity to women in the postpartum discussion groups and interviews (Table 3).

Table 3. Participant characteristics

	Pregnancy	Postpartum	Total
No. of women, n	15(33)	30(67)	45(100)
Race/Ethnicity[1], n (%)			
African American	11(73)	23(77)	34(76)
Asian	0	0	0(0)
Hispanic	3(20)	5(17)	8(18)
White	4(27)	7(23)	11(24)
BMI[1], n(%)			
Normal weight	7(47)	15(50)	22(49)
Overweight/obese	8(53)	15(50)	23(51)
Parity, n(%)			
Having/had first child	7(47)	11(37)	18(40)
Already had one child or more	8(53)	19(63)	27(60)

[1] Observed, not self-reported

They were also similar in whether or not this was their first child or whether it was their second, third or fourth child. All of these women were eligible for and most women received WIC, PCAP and attended classes at Healthy Start. Thus the sample of women who participated in our group interviews did not represent low-income women who were isolated from or refusing social services. They were women that were within the social services network at the time of the group and individual interviews. Pregnant women and postpartum women were similar across demographic characteristics, BMI, parity

and access to social services yet differences emerged between the postpartum women and the pregnant women.

Postpartum group and individual interviews assessed a limited number of demographic characteristics, which are shown in Table 3 and then broken down by interview in Table 4. Age of participant was only asked during the individual interviews. Breastfeeding status, history of breastfeeding and durations of breastfeeding were only asked as part of the group interviews. Zipcode is known for all postpartum participants. The interviews did not ask whether the mother had pre-term birth or collect information about the programs or social services that a participant received. Any information that is known about pre-term births or participation in specific programs arose from participant responses to questions that were included in Table 2 and that are not specific to eliciting details about delivery or social services received.

The number of children per participant varied from first-time moms to moms that were caring for four children at the time of the interview. Most participants had children that were close in age though a few participants had children that were about years apart. The zip codes included in Table 4 approximate the neighborhood that a participant lived in at the time of the interview. Eleven of the postpartum interview participants have zip codes (14604, 14605, 14608, or 14613) that indicate residing in the Crescent of Poverty. Only two participants lived in zip codes that are not in the city of Rochester, which is 14616 and the town of Greece, which is part of Monroe County. Fifteen of the participants had breastfed at some point after delivery that is 65% of those that were asked about breastfeeding that had ever breastfed. However, duration of

breastfeeding was quite short and ranged from 2 weeks to 6 months with most participants breastfeeding for a month or less.

Table 4. Postpartum Individual and Group Interview Participant Characteristics

	Child(ren) Age(s)	Participant Age	Zip code	Currently Breastfeeding (duration)
Group Interview A	3 months; 2 years	Between 18-35	14608	No (3 weeks)
(n=5 women)	13 months	Between 18-35	14621	No (4 months)
	11 months	Between 18-35	14613	No (3 months)
	7 months	Between 18-35	14611	No (1 month)
	6 months; 5 years	Between 18-35	14619	Never
Group Interview B	15 months (pregnant again)	Between 18-35	14606	No (5 months)
(n=4 women)	16 months; 5 years (pregnant again)	Between 18-35	14621	No (3 weeks)
	2 months; 1 years	Between 18-35	14608	Yes
	2 months; 21 month old twins; 5 years	Between 18-35	14613	Never
Group Interview C	13 months; 2 years	Between 18-35	14611	Never
(n=3 women)	2 months; 4 years; 7 years	Between 18-35	14608	No (unknown)
	11 months	Between 18-35	14615	Never
Group Interview D	18 months	Between 18-35	14608	Never
	8 months	Between 18-35	14608	Never
(n=6 women)	5 months	Between 18-35	14609	Yes
	2 months; 2 years	Between 18-35	14605	No (1 month)
	6.5 weeks; 3 years; 6 years	Between 18-35	14613	No (3 weeks)
	2 months; 2 years; 3 years	Between 18-35	14611	No (2 months)
Group Interview E	1 year	Between 18-35	14621	Never
	18 months; 9 years; 13 years	Between 18-35	14621	No (6 months)
(n=5 women)	1 year old	Between 18-35	14621	Never

	Child(ren) Age(s)	Participant Age	Zip code	Currently Breastfeeding (duration)
	4 months; 1 year old	Between 18-35	14605	Yes
	10 months	Between 18-35	14606	No (2 weeks)
Individual Interview 1	7 months; 13 years	32	14608	Unknown
Individual Interview 2	10 months; 3 years	26	14621	Unknown
Individual Interview 3	19 months	18	14606	Unknown
Individual Interview 4	12 months; 2 years; 3 years	23	14621	Unknown
Individual Interview 5	10 months; 19 months	22	14616	Unknown
Individual Interview 6	16 months; 3 years	29	14616	Unknown
Individual Interview 7	4 weeks; 14 years	32	14620	Unknown

Overview of Emergent Themes

The similarities and differences in emergent themes during the two pregnancy time periods are articulated in the following paragraphs. The first theme relates to education and employment. Next unhealthy behaviors such as smoking cigarettes, smoking marijuana, use of other drugs and drinking alcohol is addressed. Then social support from significant others, family and friends is detailed. The fourth theme relates to health issues and healthcare. Lastly, environmental constraints such as the food environment, neighborhood crime, food insecurity, homelessness and lack of resources are covered. In each of the sections below the ecological paradigm and the Theory of Integrated Behavior guided the framing of themes. The contrasts between pregnancy and postpartum are summarized in Table 5 and are organized by theoretical constructs and then by associated themes.

Barriers to Weight-Related Health Behaviors: Demographic Characteristics

Regardless of time period, similar issues related to education and employment emerged. Participants mentioned trying to finish school, which for some was high school and for others was an associate's degree. Several participants mentioned dropping out of school and not being able to finish school. In two postpartum interviews and two postpartum group interviews starting or re-starting their education after delivery was mentioned, which did not emerge in the pregnancy discussions. Comparing before having her daughter to afterwards a first-time mom in postpartum group interview A said:

> Before I didn't care about anything and I was living with roommates and partying, dropped out of school, never talked to my parents, I didn't care. Now I took my GED test last week, I do work here (Healthy Start Program) and got my license and I don't party anymore, don't do drugs anymore and so I have chilled out a lot.

For employment during pregnancy, one participant mentioned no longer working due to pregnancy complications and another participant was no longer working as an exotic dancer. Postpartum participants tended to focus more on finding work or working outside of the formal employment sector by babysitting or providing childcare for her own children as well as other children. Several participants were looking for work and had found work after delivery. In the course of all of the group interviews with low-income postpartum women there wasn't a single participant that mentioned having a job during pregnancy that was still employed in the same position as of the postpartum discussion. In other words, the employment that the postpartum participants had during

pregnancy was no longer their employment at the time of the discussion. There was one postpartum participant who mentioned receiving disability and unemployment benefits.

Barriers to Weight-Related Health Behaviors: Unhealthy Behaviors

The similarities between pregnancy and postpartum also emerged for unhealthy behaviors that continued for several of the participants well into pregnancy, such as smoking cigarettes, smoking marijuana, use of other drugs and drinking alcohol. For some, the continuation of these behaviors into pregnancy was due to lack of awareness of the pregnancy until the second trimester. In other cases the behavior was reduced compared to pre-pregnancy, and in some cases the unhealthy behavior was continued throughout pregnancy. In both time periods, the group interview participants knew that smoking, drinking and drug abuse during pregnancy were unhealthy. Despite a great deal of awareness about the risks of these behaviors some participants still engaged in these behaviors. When asked about how personal health fits in with their other priorities one participant in postpartum group interview D said, “Ha! Mine sucks. Mine is poor, very poor. I smoke cigarettes, I drink. There ain’t no personal health going on here. I go to all my appointments, but I wouldn’t if I didn’t have Healthy Start here to take me to all of those appointments” Drinking, smoking and abusing drugs in the postpartum period were mentioned in four of the five group interviews. Another participant from the same group interview then says “I smoke, but I quit the drinking… I don’t even eat. I forget to eat. I have to force myself to eat.”

Barriers to Weight-Related Health Behaviors: Lack of Social Support

During the pregnancy group interviews participants talked about healthy relationships with boyfriends, unhealthy relationships with boyfriends, and how the father of the child planned to be involved even if the father of the child was not a current boyfriend. Also for the pregnant sample the descriptions of the families involved were sometimes helpful and supportive, feeding the soon to be mother, and taking her to appointments. Other times the family was a negative influence encouraging unhealthy behaviors, supporting risky decisions, and making it difficult for the pregnant woman to make her health a priority. The social support theme also emerged postpartum with the same patterns described above where lack of support from a boyfriend and father of the child were barriers to health and where family members were in some cases enablers to healthy behaviors and in other cases they were barriers to health. A first-time mom in postpartum group interview A compared before having this child to afterwards and described her priorities:

> For me, it changed, it changed tremendously a lot, I went from being a little school girl to being a mom and I couldn't hang out and chill with my friends like I used to and it's more responsibilities. You have to get money for wipes and diapers and they don't come cheap and they run out a lot and you have to get clothes and everything and its not all about you its about you and your kids or you and your baby. I'm glad that I had my mom there for moral support to help me out a lot because if I didn't I wouldn't be here right now cause I was going crazy.

A specific aspect of the family support theme that only emerged postpartum was the participant as the supporter of the family and of the boyfriend/father of the child. Another theme that emerged related to social support during pregnancy and postpartum was the loss of or lack of social support from friends, the current boyfriend and the father of the child. This quote is from a group interview E participant:

> It has been really, really stressful, dealing with postpartum depression and financial issues, and support wise and also the father is involved, but not feeling like he is giving it his all and same for my sister she is going through the same thing too with the father of one of her kids with him not giving it his all and it is just really frustrating.

Pregnant and postpartum women talked about losing friends or how they spent time now compared to before they were pregnant/had children:

> All of my high school friends pretty much have died down. Cause some of them have kids, but like my one real close friend that I grew up with we don't really talk that much, but like we still have that understanding where we can call each other out of the blue but she has a daughter and I have two kids so things are kind of hectic right now, but we have an understanding and we aren't going to get mad at each other. Whereas though my other friends they just pushed themselves away cause they don't have kids and they like to go out and being doing everything that people like to be doing at night… Also as far as my family, like my mom and my sister. Maybe more my mom, she tried, but my family has gotten a little distant since having children. My family and friends have gotten more distant.

Another theme that emerged postpartum related to being attractive as important and thought of as a health priority, as far as getting back to a previous body size, that was more sexually appealing to the current boyfriend or father of the child.

Barriers to Weight-Related Health Behaviors: Health Related Issues

In the pregnancy group interviews participants mentioned having health conditions such as fibromyalgia that interfered with their comfort and healthfulness during pregnancy. The pregnancy group interviews also mentioned the particular pregnancy being in close succession to the previous pregnancy and not having a chance to recover, get back in shape in between pregnancies. In the postpartum group interviews, women mentioned health conditions, but there was an increase in health conditions, more of a focus on them and a great deal more emerged about mental health, depression, stress and anger in the postpartum groups. Here is a quote that describes the health condition, medical care access and prioritizing of the children over the mother's health for a participant in group interview B:

> I do have a lot of medical and mental health problems going on, like I never went to my six-week check-up after my daughter and I'm pregnant again and it is good to look out and make sure you get back on birth control or whatever. And I have back pain, which started way before ever got pregnant with my daughter and now I'm pregnant again so here comes some more back pain… At a point it is good to take care of your health and everything and of course you care about it, but then you have a kid and your priorities should be towards your kids.

The health issues of children including autism, asthma, seizures and premature births were discussed as barriers to focusing on personal health priorities for postpartum women. For one participant in group interview D, she missed her first group interview appointment because her eight month old son had to go to the hospital due seizures on the original date of the group interview. For another she had a health emergency for her child just before group interview B:

> Before I came here I just got done taking my daughter to the hospital. She keeps having these little blue spells where her fingers and her mouth turn blue and they say she is low on oxygen. So now they want to keep her like with one of those things at night to keep her breathing.

Also, healthcare access may sometimes mean coordinating appointments for the mom and child(ren) and then getting to those appointments via public transportation. In the quote below a participant talks about her experience getting to doctor's appointments on the bus:

> Doctor's appointments they're kind of harder because I usually have to take both of them and on the bus with both kids and the stroller and the baby bag and then there's people on the bus that are so rude they don't even get up so that you can sit down with the kids.

The health issues facing the moms and their children arose in all five of the postpartum group interviews and in two of the postpartum individual interviews.

Barriers to Weight-Related Health Behaviors: Environmental Constraints

The community level constraints faced by low-income pregnant and postpartum women were similar related to the food environment and the violent/crime neighborhoods, which makes sense given that the participants at both time points are from the same area. Related to the food environment, in response to one group interview participant that indicated she thinks she eats unhealthfully after you have a kid because you don't have the time to prepare foods and instead she eats whatever there is around her like frozen or prepared foods, three other group D interview participants all talked over each other to say, "Not me. For me it's McDonald's. I had a cheeseburger for breakfast. Oh and Arby's and Burger King. I've had all three of them in the past week. Anything that is quick. This morning was the first morning that I ate in a long time and it was only because I had a buy one get one free McDonald's steak bagel."

Several additional community level themes emerged for the postpartum women, which included food insecurity and homelessness. There were two group interviews and two individual interviews where homeless shelters and group homes were discussed, which seemed to indicate a higher level of homelessness in these women than was expected. In addition, women frequently mentioned skipping meals, not eating for days at a time, forcing themselves to eat, and running out of food. In response to the question what are some of the things that make it difficult to eat a healthy diet, a participant in group interview C said the following, which relates to transportation, lack of resources, the food environment and food insecurity:

> Time and sometimes you don't have a way for you to get to the store for stuff for a healthy meal and so you just have to eat what is close to you. Money, cause eating healthy is not that easy and I think it is more expensive. So truly, the vegetables are just more expensive than getting junk food. Money wise we only have one income and it is hard to eat healthfully. The lack of stuff that is in your house and making sure that the children eat first so that you don't take from the children.

The quote above not only indicates environmental constraints it also is an example of one of the many statements that participants made during the group interviews to indicate that they knew about eating well and recommendations for diet. Three respondents from the same group interview said the following in response to a question about what would make it easier for you to eat a healthy diet:

> Transportation to the store. That and support other than the simple welfare that's out there. Isn't there something more than welfare? Food stamps would be helpful. And healthy food isn't as available as junk food is. As soon as you walk outside your house there's a corner store here and that there and you think quick and it isn't healthy instead of going way to the grocery store.

This quote highlights both the food environment as well as difficulties shopping for food and transportation issues and identifies a need for additional resources beyond what "welfare" is present and for food stamps. Other community level difficulties included taking a stroller on the bus to go food or clothes shopping, needing to have clothes,

diapers, formula and food for their children and feeling like that need exceeds what the women are most often able to do.

Summary of the Results

As summarized in Table 5, for demographic characteristics the themes of education and employment emerged in both time periods, but with slightly different nuances during postpartum. The mention of postpartum women finishing school and seeking work in the postpartum time period makes sense given that jobs typically employing low-income women lack maternity leave. Thus it is not surprising that these particular differences in demographic characteristics emerged.

For unhealthy behaviors the themes of smoking, drinking and drug use, emerged during pregnancy and postpartum and theme related details were almost identical during both periods. For most postpartum participants that spoke of unhealthy behaviors those habits had continued during pregnancy or at least partially resumed after delivery.

Postpartum social support related themes were similar to those of pregnancy for lack of social support and for relationship issues. However, postpartum a unique theme emerged related to a desire to return to a sexy body and to fulfilling the sexual needs of a partner, which did not emerge in pregnancy group interviews. Also, the family theme differed between both time periods such that dependence of other family members upon postpartum women was different compared to pregnancy in that during postpartum, women were relied and depended on for more than during pregnancy.

The health conditions and health care issues category has multiple themes within it: (1) Maternal Health; (2) Pregnancy; (3) Healthcare; (4) Child Health and (5)

Appointments. Postpartum women not only faced significant personal medical issues, such as postpartum depression, but they also dealt with major medical issues for their children, such as seizures. The burden of personal and child related medical issues in the postpartum population was distinct from the pregnancy population whereas the issues related to pregnancy, healthcare and appointments were fairly similar.

The environmental constraint related themes of food environment and violence/crime were similar between time periods, yet food insecurity, homelessness, transportation challenges, shopping issues and a lack of resources were unique to postpartum. Material deprivation related to basic needs like food, shelter, clothing, and diapers during the postpartum group interviews was particularly distinct from pregnancy.

Table 5. Challenges of Low-income Pregnant and Postpartum Women

Theory & Theme	Pregnancy	Postpartum
Demographic characteristics/Intrapersonal		
Education	finishing school, GED, dropping out of school	finishing school, GED, dropping out of school, **starting community college**
Employment	Unemployment	Unemployment, **underemployment, disability, job seeking**
Other	Minority race and ethnicity Low-income	Minority race and ethnicity Low-income
Unhealthy behaviors/Intrapersonal		
Smoking	smoking cigarettes in pregnancy	smoking cigarettes in pregnancy and **after delivery**
Drinking	drinking alcohol late into pregnancy	drinking alcohol late into pregnancy
Drug use	mention of smoking weed, abusing drugs, overdosing prior to pregnancy and during pregnancy	mention of smoking weed, abusing drugs, overdosing prior to pregnancy and during pregnancy

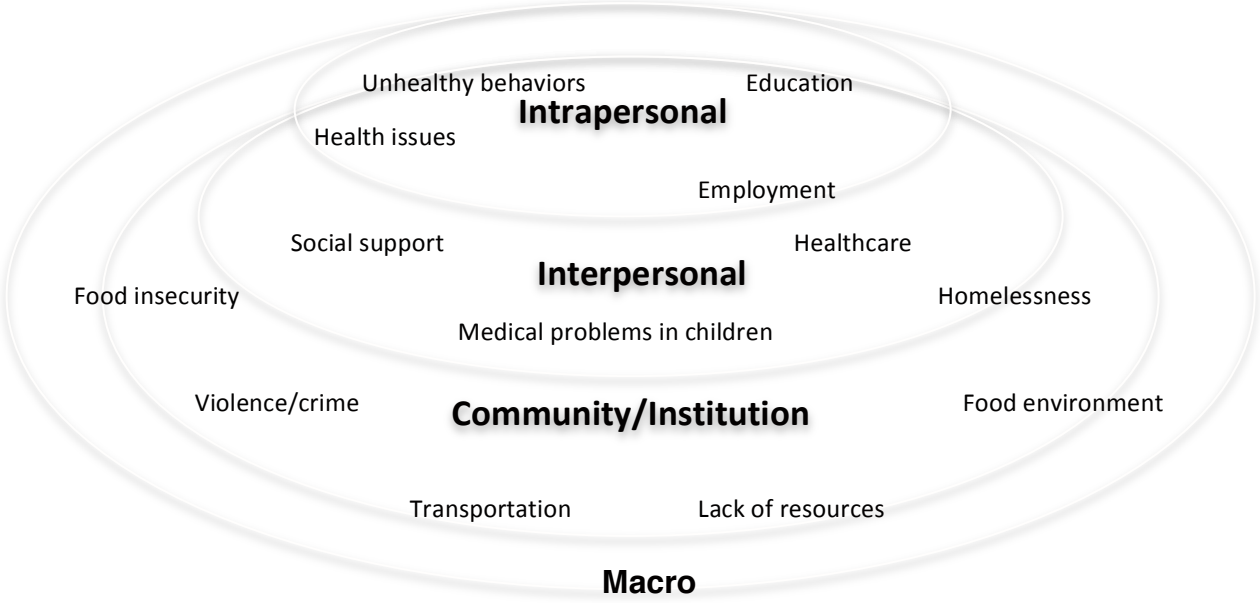
Theory & Theme	Pregnancy	Postpartum
Social Support/Interpersonal		
Relationship	significant other, baby daddy, husband	significant other, baby daddy, husband
Family	relationship present or past with mom, dad, siblings, broader family	relationship present or past with mom, dad, siblings, broader family, **supporting family members**
Lack of support	lost friends, no help from baby daddy, no help from boyfriend	lost friends, no help from baby daddy, no help from boyfriend
Sex		**related to sex, such as sexy body image and importance of sex**
Health conditions and healthcare providers/Interpersonal and Intrapersonal		
Health issues	mention of pre-existing health conditions	mention of pre-existing health conditions, **mental health issues, postpartum depression, stress, anger**
Pregnancy	short pregnancy interval, parental responsibility, birth control	short pregnancy interval, parental responsibility, birth control
Healthcare	interactions with healthcare providers and system	interactions with healthcare providers and system
Medical problems with children		**Asthma, In and out of hospital, Seizures, Child behavior problems, Hypoxia, Autism, Developmental issues**
Appointments		**having appointments, attending appointments, priority of appointments**
Environmental constraints/Community and intrapersonal		
Food environment	fast food environment, soul food preferences	fast food environment, soul food preferences
Violence/crime	Money laundering, Criminal activity environment, fear about violence	Money laundering, Criminal activity environment, fear about violence
Food insecurity		**not eating much, food pantries, food stamps, providing food for others**
Homelessness		**being homeless, staying in shelters/group homes, not on streets**

Theory & Theme	Pregnancy	Postpartum
Shopping		**grocery and clothes shopping**
Transportation		**bus**
Lack of resources		**no phone, computer, diapers, furniture, clothes, formula, housing**

*Note: Differences between pregnancy and postpartum are shown in **bold**.*

As shown in Figure 3, postpartum low-income women face barriers to weight-related health behaviors within all spheres of the ecological paradigm. They are dealing with personal health issues, unhealthy habits/behaviors, employment, and education at the intrapersonal level. And at the interpersonal level the types of challenges include lack of social support, health issues in their children, and healthcare access. Also, they are confronting community and institutional barriers to healthy behaviors such as homelessness, food insecurity and lack of resources.

Figure 3. Ecological Model Applied to Low-Income Moms



Thus it is very hard for low-income postpartum women to engage in behaviors that are promoting of healthy weights. They are trying to get themselves in a position to earn a living via education or finding a job and if they had a job during pregnancy, that position ended and the employment search started in the postpartum period. They seem to have children with a lot of health problems and they need to take care of them, which is time consuming in and of itself and an additional child means one more set of potential health problems with associated appointments. Lastly, one more child means additional economic strain on the family's limited financial resources. As such the combination of these factors at multiple levels makes weight-related behavior change particularly difficult.

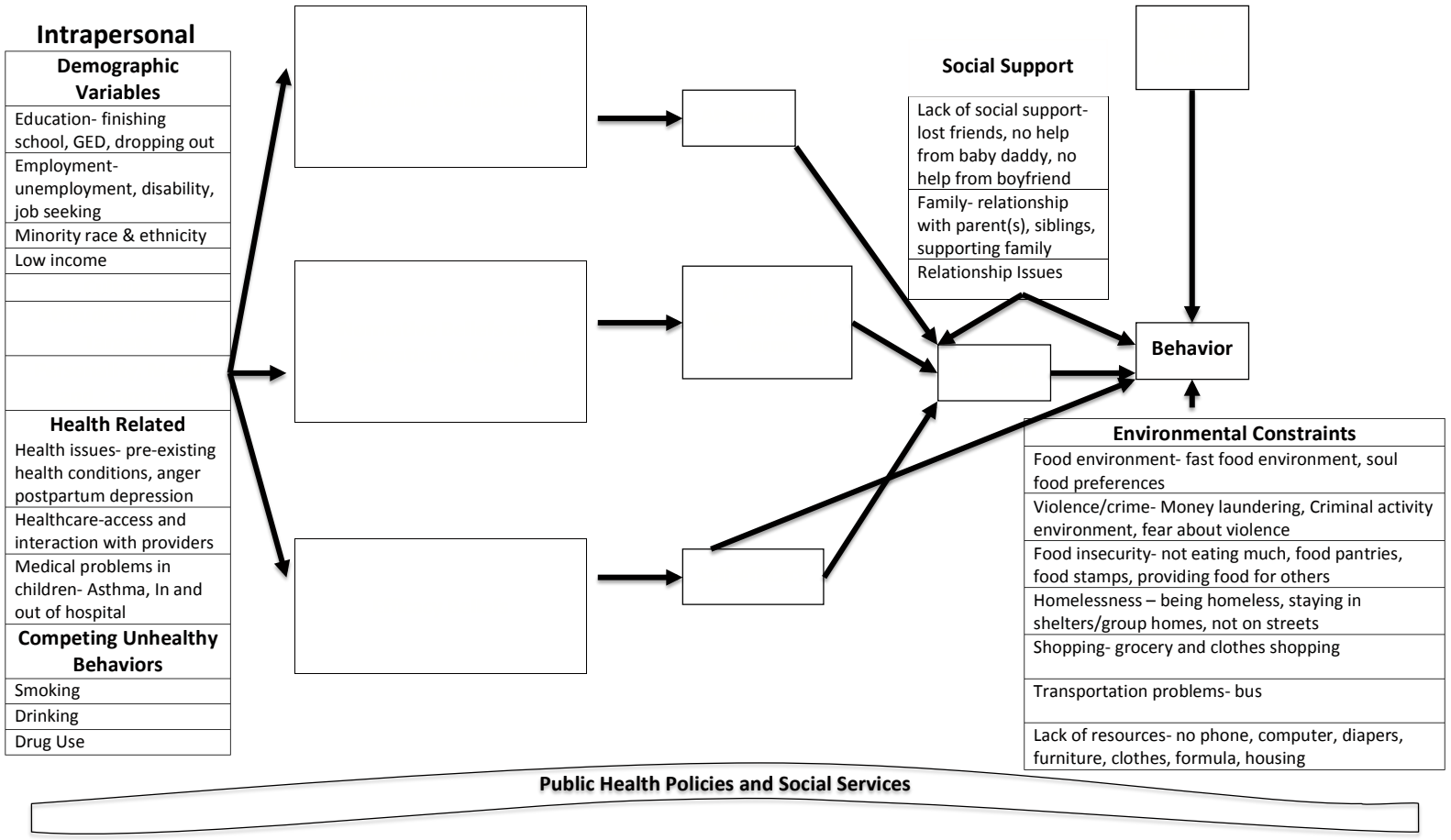
Discussion

In the results, the barriers to weight-related health behaviors have been described and compared between pregnancy and delivery. To better illustrate how these barriers may impact weight-related behaviors and behavior change, the challenges faced by postpartum women that were shown in Table 5 were combined to create a modified integrated model of behavioral prediction presented in Figure 4. Demographic characteristics, health issues and competing unhealthy behaviors impact behavior through either behavioral beliefs, normative beliefs or efficacy beliefs, which lead to attitudes, norms and self-efficacy all of which impact behavioral intention, which impacts behavior. The pathway for social support is more direct and impacts either intended behavior or behavior. The mechanism for environmental constraints influencing behavior is direct, meaning that food insecurity, as an environmental

constraint, has a direct influence on fruit and vegetable consumption, which is an example of a weight-related health behavior.

In Paul et al 2013 the pregnancy low-income group interviews identified and described behavioral beliefs, normative beliefs, and efficacy beliefs related to weight-related health behaviors. The interview guide questions that were designed to elicit information about these constructs were not explored as part of the present research and are greyed out in Figure 4. Similarly, attitudes, norms and self-efficacy, which are also described in Paul et al 2013 in relationship to behavior change and gestational weight gain were not the focus of the present study and those interview guide questions and associated responses were not analyzed.

Figure 4. Conceptual Framework for Behavior Change For Low-Income Moms



Note: Bolded items reflect the thematic categories that emerged for postpartum low-income women

Disparities in the prevalence of obesity occur among childbearing women, with disproportionate rates seen in low-income or minority women (3). More low-income women enter pregnancy overweight, gain excess weight during each pregnancy, and fail to return to their baseline pre-pregnant body weight, creating a vicious cycle of increasing body fat and obesity (15). As such, the postpartum period is especially critical for changing behaviors to promote more healthful weight management in women (69). Yet the results from this research suggest that changing behavior during the postpartum period among low-income, minority women could be very difficult due to the numerous barriers they face.

This is despite the integration of low-income women into programs like Healthy Start, WIC, SNAP and PCAP during the pregnancy and postpartum time periods. Such that there are still many challenges preventing the basic needs like shelter and food from being available to postpartum women. These issues of food insecurity, homelessness and lack of resources were particularly prominent among postpartum women and came up as barriers to health. A quote from one of the focus group participants illustrates this point:

> I think it's (your personal health) very important for everybody. It's just a simple fact that we either don't have time or we just can't do it right now, but I think I speak for everybody when I say that it is a very big priority for us we all care about being healthy and everything. There's just no time or no resources or we just can't. There is always something in the way.

Intervention Implications

Postpartum interventions across incomes have struggled to be effective in behavior change (55, 103-108). Drawing from the results of this study, a potential difference in significant associations by race in Ryan et al's 2011 paper could relate to the significant influence on weight management behaviors for environmental constraints, lack of social support, and health issues that face lower income or minority status women (60). In the model in this study, several of the significant paths from the Ryan paper are included, but in addition the present research includes the following as influencers of behavior change: (1) health and health care related issues; (2) competing unhealthy behaviors; (3) public health policies and social services. In both the pregnancy interviews and the postpartum interviews, knowledge about diet and nutrition was discussed by participants. As such, nutrition knowledge was not a significant factor for eating well during both time periods. Lack of social support and environmental constraints may play a much more prominent role in preventing behavior change among low-income postpartum women and should also be included prominently in any framework for weight related behavior change. Thus the additions made as part of this research to the Theory of Integrated Behavior that are shown in Figure 4 may be quite important for intervention development for minority or low-income women.

Policy Implications

There are several potential policy implications for this research at both the national level as well as at the local level. The familial and social prioritization of feeding a pregnant woman compared to feeding a postpartum woman coupled with the

prevalence of food insecurity and homelessness among postpartum women, despite the presumed receipt of either SNAP and/or WIC by the mothers is quite concerning. The level of support provided by these programs particularly when mothers are single parenting, supporting other family members and having children in quick succession appears to be insufficient as a safety net for mothers and their young children. Are the SNAP and WIC food benefits received sufficient once an additional mouth (child up to 18 months old) has been added to the household?

The gaps in health insurance for low-income childbearing women are of current policy relevance. The fundamental issue of expanding insurance coverage during pregnancy and then contracting insurance coverage after delivery creates a system in which women of childbearing age are falling through the cracks of preventive health care and family planning. Postpartum women missed their six-week after delivery visits and were not seen for medical care again until they were pregnant again. Other research and policy statements have explored this particular issue with quantitative research (56, 109-111), but the present research adds additional depth and description to what has been previously articulated.

Strengths

One strength of this study is that the participants were recruited from the same area and were even recruited from the same programs during both time periods and so they were comparable samples. Another strength of the study is that both the pregnancy data collection and the postpartum data collection took place during the same calendar year and were collected by the same researchers, which provided measurement

consistency. There were also several other strengths to this study, which included: (1) group and individual interview discussion guides having a theoretical basis; (2) group interview guides were piloted and revised, prior to conducting the first group interviews in Rochester for both pregnancy and postpartum; (3) the sample, while not representative, resembled the low-income population in the geographical area where the research was conducted.

Limitations

The difference in themes that emerged from the sample after delivery in our study compared to the women in pregnancy does not necessarily mean that the same themes may not have emerged from a different sample of low-income women during pregnancy. If the focus group discussions had been longitudinal in design then the additional issues expressed after delivery could have been attributed to the postpartum time period. Similarly, themes that emerged in these particular samples of pregnant and postpartum women offer depth and detail related to the issues facing these particular women. However these issues cannot be generalized and may not apply to other populations of low-income pregnant and postpartum women. Postpartum women may have been more likely to discuss issues that they were facing than pregnant women given potential stigmatization for pregnant women expressing difficulties for prioritizing personal health and taking care of oneself.

The number of women in the postpartum sample is double the number of women in the pregnancy sample and while theoretical saturation is the aim of qualitative research, it could be that additional postpartum issues emerged just due to having a

larger sample of postpartum women. In pregnancy, the group interviews were small in size and smaller than the postpartum group interviews due to participants missing their interview appointment time. This small size and potential bias of those that were able to attend the pregnancy focus groups is a limitation. The limited amount of demographic data, including social services programs received and age of all participants, are significant limitations in the present research. Another potential limitation is that the differences between the two time periods could be related to a difference in seasons since the pregnancy group interviews took place in the spring of 2010 (May) and the postpartum group interviews took place in the winter of 2010 (November and December).

Conclusions

In summary, there are a great number of constraints that impede healthy behaviors in low-income women. The ways in which these intrapersonal, interpersonal and community aspects were different after delivery compared to before delivery were predominantly related to environmental constraints and health conditions and healthcare. As such multiple pathways were identified that impeded healthy behaviors during the postpartum period. These multiple pathways articulate more than previous work has shown what the specific barriers for engagement in a healthy lifestyle postpartum intervention are for low-income women. To reduce the likelihood of increasing BMI with the birth of each child, the influence of socio-ecological conditions experienced by low-income postpartum women cannot be ignored.

This research addresses an important gap in the literature by comparing the barriers to weight-related healthy behaviors between pregnant and postpartum low-income women. Previous research has shown low retention in postpartum research and this particular study gives some concrete reasons for why women may not be participating in research after delivery. In addition, this research highlighted the prevalence of environmental constraints as well as family health issues, which indicate a need for action at the community level and policy level for significant improvements to be made.

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Glossary

Action stage	From stages of change theory, it is the stage at which the person is ready to do a behavior.
Body Mass Index	Weight divided by height multiplied by height. Body mass index is used to classify individuals into low, normal, overweight or obese groups. Overweight and obese individuals are at increased risk of certain diseases.
Conception stage	From stages of change theory, it is the stage at which the person is thinking about doing a behavior.
Low-income	The definition of low-income in this research is that a participant indicated that she qualified for WIC or PCAP. The income criteria for WIC is at 185% of federal poverty line and the income criteria for PCAP is also 185%.
Pre-conception stage	From stages of change theory, it is the stage at which the person is not yet thinking about doing a behavior.
Prenatal Care Assistance Program	A federal program implemented by each state that provides health insurance for pregnant women that meet the income criteria of 185% of poverty line.
Supplemental Food and Nutrition Program for Women, Infants and Children	A federal program that provides food vouchers, nutritional guidance and other services during pregnancy and up to when children are 3 years of age depending on income and other criteria.
Supplemental Nutrition Assistance Program	A federal program formerly known as food stamps, which provides food benefits to individuals that meet the income and other related criteria.

Revision:**11/9/07**

INITIAL APPROVAL REQUEST
for Social and Behavioral Studies Involving Human Participants

For IRB Use Only
IRB ID#____-____-_____

CORNELL UNIVERSITY
Institutional Review Board

SECTION I

Name of Investigator: **Christine M. Olson**
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School & Department **Human Ecology & Division of Nutritional Sciences**
Administrative Mgr. **Rich Duell**

Status:
☒ Faculty ☐ Ph.D. candidate ☐ Undergrad
☐ Research Associate ☐ Other Grad. Student ☐ Other
☐ Post-doc ☐ Staff

Faculty member supervising project (if applicable) _____
Email address _____
Campus address _____

Title of Project: **Formative Research on Electronically-Mediated Weight Interventions for Pregnant Women**

Other Study Investigators:	**Name**	**Affiliation**	**Location**
	Isabel Diana Fernandez	**Dept. Comm. & Prev Med**	**University of Rochester**
	Geri Gay	**Dept. Communications**	**Cornell University, Ithaca**
	Susan W. Groth	**School of Nursing**	**University of Rochester**
	Jeff Niederdeppe	**Dept. Communication**	**Cornell University**

Other Members of Research Teams (include students):		
Myla Strawderman	**Div. Nutr. Sciences**	**Cornell University**
Keriann Paul	**Div. Nutr. Sciences**	**Cornell University**
Meredith Graham	**Div. Nutr. Sciences**	**Cornell University**
Jill Freeman	**Dept. Communication**	**Cornell University**
Jillian Scott	**Div. Nutr. Sciences**	**Cornell University**

Have all investigators and other researchers working on this project successfully passed the IRB, the NIH, or another university's human participant's training online? ☒ Yes ☐ No If not, you need to inform them that Cornell must have written documentation of training in human participant protection.

Start Date of Project (initial contact with subjects): **02/01/10** **Estimated End Date of Project**: **02/01/12**

1. Is this research funded by an external (non-Cornell) sponsor(s)? ☒ Yes ☐ No ☐ Pending approval

   If Yes (or Pending), what is the name of the sponsor(s)? **National Heart Lung and Blood Institute (NIH)**

   If you know the project's SPS #(s), please provide: **57649**

   If you are waiting for funding to develop instruments and/or consent forms, etc., please check here: ☐

   If this is a new proposal, please submit a copy of the proposal.

2. Is this research being conducted for a course? ☐ Yes ☒ No

   If Yes, name of course: _____

   Name of instructor: _____

3. Is this research being conducted for your thesis or dissertation? ☐ Yes ☒ No

   If Yes, attach a copy of your thesis or dissertation proposal.

4. **REQUIRED:** Provide in layman's terms a brief summary description of the hypotheses or goals (if applicable). Limit to one paragraph.

   This project aims to expand the understanding of how to slow the accumulation of weight in childbearing women by developing, implementing and evaluating electronically-mediated educational programs for pregnant and postpartum women. This IRB application covers the formative research phase of the project, which is being led by researchers at Cornell University. Through the formative research phase, electronically-mediated patient interventions (e-interventions) will be refined, developed, and beta-tested for pregnant and postpartum women. Intercept surveys will be done with women to determine their current media usage. In-depth interviews will be conducted with a smaller sample of pregnant women to explore their media literacy, current usage of media, barriers to using social media, and perceptions of various electronic systems of delivering messages. Focus groups will take place with pregnant women to refine the messages that will be used in the prenatal e-intervention. Beta-testing of the prenatal e-intervention, whereby a small set of women begin to use a pilot-version of the electronic intervention to identify potential technological problems and solutions, will also be conducted. The University of Rochester is the IRB of record for this proposal. Their IRB only considers the randomized controlled trial to be research and encouraged us to put the formative phase of the project through Cornell's IRB. (See Attached IRB Approval from the University of Rochester)

5. Describe the design of your research and planned use of human participants. Be sure to include the specific location at which any interaction with human participants will take place. (Please limit to a maximum of one page.)

   In this application, we are seeking approval for the formative research phase of the project that has 4 distinct parts that we will call parts A - D. To introduce the response to this question, each will be described briefly: For the prenatal e- intervention, we will conduct intercept surveys with young women (Part A), conduct in-depth interviews with pregnant women (Part B), conduct focus groups with pregnant women (Part C) and conduct beta-testing of the prenatal e-intervention with pregnant women (Part D).

PART A- Intercept Surveys with Women- We will conduct between 100-150 intercept surveys with young women in public spaces. These intercept surveys ask basic questions about the use of cell phones and cell phone technology as well as use of the internet and internet based social media. The data collected from the intercept surveys will provide basic information about media usage by women in the Rochester area. Potential survey sites include: Local grocery stores, stores catering to new or expecting parents like Babies R' Us, Buy Buy Baby, and local malls. We have attached a draft interview guide for the Intercept Surveys (Appendix A-1).

PART B- In-depth Interviews with Pregnant Women-We will recruit between 25 to 40 lower-income women for in-depth interviews that will be conducted at Healthy Start sites, Community OB-GYN the Strong Midwifery Practice, and Monroe County WIC in order to assess the extent to which lower-income pregnant women use social media and potential hurdles for women to utilize our potential e-interventions. Women will be recruited through existing contacts in Rochester via Cornell's Cooperative Extension program. These interviews will last 20 to 40 minutes. They will be audio-taped, transcribed, and analyzed using standard qualitative data analysis methods such as the constant comparative method. We have attached a draft interview guide for the semi-structured in-depth interviews (Appendix B-1).

PART C-Focus Groups with Pregnant Women- We will conduct a maximum of 5 focus group sessions each with two distinct subpopulations of the pregnant women recruited from participating clinics and private practices in Rochester, NY. For recruitment, we will collaborate with the Perinatal Network of Monroe County's Healthy Start Center program that provides services and education to low income, minority pregnant women and young families. In addition, we will work with private practices and hospital-affiliated clinics in the recruitment of higher income women. We anticipate that the subgroups will be low (Medicaid eligible) and higher income women, totaling 8-10 focus group sessions (2 subgroups x 4-5 sessions for each subgroup). Each focus group will include 8 to 10 participants for a total of 64 to 100 women. We will use the materials from a previous study (already conducted and previously approved by Cornell's IRB) as the initiation point for the discussion. These materials are attached to the application (Appendix C-2). The focus groups will be conducted by a trained and experienced moderator following the guidelines of Krueger in locations that are convenient for women in Rochester, NY (eg. clinics, WIC, Perinatal Association) and childcare will be provided. They will be audio-taped, transcribed, and analyzed using standard qualitative data analysis methods such as the constant comparative method. We have attached an outline of a focus group guide that is in it's initial development (Appendix C-1).

PART D-Beta Testing of Intervention -- We will beta-test the e-intervention (online) with 25 women who are representative of our key income subgroups. Beta-testing will proceed in an iterative manner with groups of about 5 women. Revisions will be made as needed between iterations. For this testing, women will be recruited from the set of women who participate in the focus groups.

6. Will you ship any biological or diagnostic samples/specimens as part of this research? ☐ Yes ☒No

If Yes, please contact the Biological Safety Officer at Environmental Health & Safety (4-4888 or fac2@cornell.edu) for specific shipping requirements.

7. Outline possible benefits the proposed study may provide to an individual participant, social group, or society. If there are no direct benefits to the participants as individuals, please state this explicitly here.

   No direct benefits for participants as individuals, except to know that the informtion they provide may help other women to be healthy. Society has the potential to benefit from knowledge gained about successful interventions to help pregnant women and their babies become healthier.

8. Please outline possible risks to participants in your study, including special or select types of participants.

   The risks to pregnant women are embarrassment from talking about weight and diet issues in a group situation. There is some very minimal risk that their identity could be disclosed despite our every effort to protect it.

9. Please describe the steps you have taken to minimize risk to participants.

   In terms of embarrassment, women do not have to answer any question or will not be forced to participate in discussions on topics on which they feel uncomfortable. All identifying information (name, address, phone number and e-mail address) will be stored on password protected computers and in locked cabinets in locked offices. It will only be available to trained and IRB certified project staff. This information will only be used to remind women to attend focus groups and complete tasks on the project web site. We may also need this information to distribute the incentives for participation. Identifying information will be kept as long as required by the IRB and then destroyed.

10. Does this study involve **secondary data analysis or restricted/limited data (includes HIPAA)**?
    ☐ Yes ☒ No

    If Yes, provide a brief description in the field below of each dataset and *indicate from which databank(s) or source(s) the data will be (has been) obtained*. For each dataset, please include the following information:

    a. Can the names or identities of participants in the dataset be deduced from the data fields?

       _____

    b. Is the dataset public-use (no restrictions on use) **OR** is the dataset restricted or limited access?

       _____

       If restricted or limited access, attach a copy of the licensing agreement you signed with the distributor, as well as a copy of your data security plan.

    c. Are you planning to merge geographic, company, census, community or other potentially identifying data into an individual-level dataset during the course of this project? ☐ Yes ☐ No

       If yes, attach a description of how you plan to protect the data from unauthorized use.

    d. Will anyone other than you have access to any restricted or limited access dataset(s)? ☐ Yes ☐ No

       If yes, provide their names, and ensure that they have completed the required education in the use of human participants. Submit copies of affidavits, non-disclosure agreements, or similar documents they were required to sign with the distributor.

       _____

If your study involves secondary data analyses only, please skip to Section II, question 18.
For all other studies, please fill out the remaining questions.

SECTION II

Please answer the remaining questions thoroughly and completely.

1. How many participants do you plan to recruit for the entire study? **Part A (intercept surveys) = 100-150 women; Part B (in-depth interviews) = 25-40 women; Part C (focus groups) = 64-100 women; Part D (beta-testing) = 25-40; TOTAL = 214-330**

2. What is the expected age range of participants? **18** to **35** years **[Note: this must match all attached documents submitted.]**

3. Will your participant sample include Cornell University students? ☐ Yes ☒ No

   If Yes, answer a. – c. below:

   a. do you plan to recruit participants from classes that you personally teach? ☐ Yes ☐ No
      If Yes, provide a justification for the collection of data from your own students in #8 below.
   b. will participants be obtained from the Psychology Dept. SUSAN website? ☐ Yes ☐ No
   c. will participants be obtained from the University Registrar? ☐ Yes ☐ No

4. Please estimate: Proportion of female participants 100% Proportion of minority participants (U.S. only) 50%

5. Explain how you plan to recruit your participants. Specify the exact wording of requests, notices, or advertisements recruiting subjects. **Attach draft advertisements, flyers, letters, or descriptions posted on SUSAN. (**Please also indicate the specific locations where participants will be recruited.)

   Participants in the intercept interviews will be recruited outside of public locations and women will provide verbal consent. We will work with the Perinatal Network of Monroe County's Healthy Start Center and with private medical (obstetric and pediatric) practices as well as hospital-affiliated prenatal and pediatric clinics in Rochester, NY to recruit women to participate in the in-depth interviews and focus groups. We will recruit the women for the beta-testing from those who participate in the in-depth interviews and focus groups. The invitation will be verbal at the end of the focus group session with follow-up phone calls. (See Appendices A-3, B-3, C-3 and D-3).

6. Will participants be compensated for their time? ☒ Yes ☐ No

   If Yes, please describe the compensation.

   For participation in the intercept surveys women will receive $5 gift cards to a local merchant. For participation in the in-depth interviews women will receive $25. For partitipation in the focus groups women will receive $40. For the beta-testing of the intervention women will receive $40.

7. Do you plan to use email or the Internet to recruit your participants? ☐ Yes ☒ No

   If Yes, you should be aware that email and Internet transmission are neither private nor secure. Please include a sentence in your consent document that alerts participants that there is a chance their answers could be read by a third party.

8. Check which category(ies) of participants will be included in your study. For all categories other than the first (mentally competent adults), additional safeguards are required to protect these populations from undue influence/coercion in the recruitment process, risk during the study, etc. Explain the additional safeguards to be provided.

☒ Only mentally competent adults or secondary analyses of existing data

☐ Children under 18: Active, written parental consent is a federal requirement, unless waived by IRB after review. It is generally expected that you also obtain the *written assent* of minors 7 years of age and older. **Attach copies of parental consent form (and minor's assent form when applicable)**.

_____

☐ Employees of the investigating group: Please justify the use of this group, and explain how undue coercion in the recruitment process will be avoided.

_____

☐ Students enrolled in your own classes: Please justify the use of this group. Federal regulations discourage the use of students enrolled in classes taught by principal investigators.

_____

☐ Cognitively-impaired persons: How will you screen potentially cognitively-impaired subjects to determine when proxy consent is required? **Attach copy of proxy consent form, and subject assent form (if appropriate).**

_____

☒ Pregnant or nursing women

We are not doing any invasive procedures. The topics we are discussing (media use, diet, physical activity and weight) are considered part of the general health education topics discussed by health care providers with women in our target groups.

☐ Prisoners or juveniles under detention or on probation

_____

☐ People in foreign countries: Please describe how you are collaborating with the local communities, government, or other institutions (as relevant to your project), and include documentation as appropriate.

_____

☐ Other potentially vulnerable participants: Who, and why?

_____

9. Check additional sources of data that will be used in your study.

☒ None

☐ Census/public records

☐ Discarded human materials

☐ Medical records

☐ Registries (e.g. cancer registry) Name of registry: _____

☐ Blood, urine, or tissue samples

☐ Other (explain) _____

10. Duration of participant's participation, through each component of the study, and in total. **Please provide full information for each component of the study.**

The intercept surveys will last 3-5 minutes. The in-depth interviews will last 20-40 minutes. The focus groups will last for 1 1/2 hours to 2 hours. The beta-testing may take a bit longer, possibly 2 to 2 1/2 hours depending on the indivual's speed in using mobile phones/computer. For those individuals who wish to participate in multiple components (eg. focus group and beta-testing of e-intervention) their contact with the project could span 3 to 4 months, at the most, but they would only devote about 4 hours in total to the project over the time period.

11. Check any/all of the following procedures that apply to your study. For ***each*** procedure checked, 1) explain the procedure in detail, and 2) provide the ethical and scientific justification for employing the procedure.

☐ Deception (When and how will the participants be debriefed? Generally, the nature of the deception and its necessity should be explained to the participants. **Attach a copy of your debriefing form/script**.)

_____

☐ Punishment: _____

☐ Use of drugs: _____

☐ Covert observation: _____

☐ Induction of mental and/or physical stress: _____

☐ Procedures that risk physical harm to the subject: _____

☐ Materials commonly regarded as socially unacceptable: _____

☐ Procedures that might be regarded as an invasion of privacy: _____

12. Is confidentiality promised to the participants? ☒ Yes ☐ No If No, please explain. _____

a. If confidentiality is promised, will access to names be under your exclusive control? ☐ Yes ☒ No

If No, who else will have access to the names, and what will be done to protect the confidentiality of the subjects? **Trained, IRB-certified paid project staff will have access to the identifying information in order to contact and distribute incentives to research participants.**

b. Where will the names be recorded (e.g., on test protocols, on a separate list with code numbers, in a computer file, etc.)? **The names and other identifying information will be on a separate paper list and also in a computer file on a password-protected computer. For the in-depth interviews and focus groups, women will have pseudonyms in the data sources such as transcipts and audio-recording. For the intercept surveys and beta-testing, women will be given subject id numbers.**

c. For what purpose(s) will names be recorded? **For reminders of time and date of participation in data collection and distribution of incentives for participation.**

d. If confidentiality is promised, what additional steps are you taking to keep their data secure? **The key linking identifying information and pseudonyms or id numbers will be kept in a secure, locked place and available only to paid project staff. We may be required by Cornell to keep receipts signed by research participants for the money that is dispersed as incentives. These will also be protected and only made available to auditors and financial administrators as required by law. Participant id numbers or pseudonyms will not be included on these receipts so names cannot be linked to data.**

e. Will names of participants be included in any publication based on this study? ☐ Yes ☒ No

If Yes, for what reason(s)? _____

13. Will any data be gathered through photographic, video or sound-recording devices? ☒ Yes ☐ No

If yes, answer a.-d. below, and be sure to include all this information on your consent form(s) as well as **provide a separate signature line for the participants to agree to be video/audio taped and/or photographed.**

a. What types of recording devices will be used and what will be recorded? **The in-depth interviews and focus groups will be audio-taped and transcribed.**

b. Please provide scientific justification for gathering data using the device(s) enumerated above. **To accurately capture the data for the analyses we wish to conduct, we feel we must audio-tape the focus groups.**

c. What will be done with the still photos, video or audio recordings after the study has concluded? (I.e., used in publications, presentations, etc.) Selected quotes from the interviews and focus groups may be used in publications. The identity of the individual from whom the quotation comes will not be revealed. The tapes will be destroyed (see timeline below), and the transcriptions will not contain any identifying information.

d. When, if ever, do you plan to destroy these records (specify when for each type)? We will destroy the audio tapes 3 years after the intervention for Phase 2 (theRandomized Controlled Trial) is developed (about the end of the study period). We will destroy the transcripts of the audio tapes 3 years after the publication of the results from Phase 2 (RCT; not covered in this IRB submission).

e. How will you protect the confidentiality of the materials produced by such devices (if so promised)? (Remember that faces alone reveal identity, even if captions with names are not provided.)

The interviewees and focus group participants will only be referred to by pseudonyms in the audio taped interviews. The tapes themselves will be kept in a secure office of project staff in a locked filing cabinet. Only trained medical transcriptionists will be used for transcription and they will only be given a few tapes at a time to transcribe which will be returned to us with transcripts. It is highly unlikely they will recognize the voices of participants.

14. Sometimes research findings are presented in a manner that permits knowledgeable readers to infer the identity of a person used as a participant, even if names are omitted. Do you expect to present findings that may possibly provide such clues? ☐ Yes ☒ No ☐ Confidentiality not promised

If Yes, explain how you will protect the identity of participant, or alternatively how you will explain to them that their confidentiality cannot be absolutely protected. This information should also be conveyed to participants on the study consent form.

_____

15. Will information be obtained pertaining to persons other than immediate participants (e.g., their friends)?
☐ Yes ☒ No

If Yes, how will the confidentiality of such persons be protected? If their confidentiality is not promised, please explain here.

_____

16. Do you intend to obtain written consent? ☒ Yes ☐ No

If Yes, refer to *Required Components of Informed Consent Documents* on the IRB website attach a copy of the consent form. If collecting data from minors you must address both parental consent and the child's assent.

If No, please answer questions *a – c* below.

a. Why do you not intend to use such forms? This must be a strong argument (i.e., scientific validity).

_____

b. In what manner and to what extent will you give potential participants advance information about the study procedures? If using a contact letter, please attach it.

_____

c. In what manner will potential participants be advised that their participation and continuation in the project is entirely voluntary? Please provide a copy of the text to be used.

_____

17. If proposing to use oral consent (e.g., telephone survey, illiterate subjects), provide a copy (script) of the text that you will use.

Oral consent will only be used for the intercept interviews. All other forms of data collection will involve written consent. The script for the intercept interview consent is as follows:

Hello my name is _____ and I am working on a joint project with Cornell University and the University of Rochester. Do you have 3-5 minutes to answer a few questions about your use of cell phones and other technology in exchange for a $5 gift card? (If not between the age of 18 and 35, STOP here.) Thank you very much for your time, but our study is focused on women between the ages of 18 and 35.

(If between the age of 18 and 35) Would you be willing to answer a few questions about yourself and your technology usage? YES, then continue…

18. Has this study been reviewed (or will it be reviewed) by another institution's Institutional Review Board (IRB) or another ethical review body (including Cornell Medical)?

☒ Yes ☐ No

If already reviewed, attach a copy of the approval/deferral notification you received from that IRB. If this study **will be** submitted to another IRB, please indicate below the institution and give the approximate date for the review.

We have attached drafts of the recruitment materials for the intercept surveys, in-depth interviews, focus groups, and the beta-testing (Appendices A-3, B-3, C-3 and D-3), as well as the consent forms (Appendices B-2, C-2 and D-2). We have also attached the materials that will be the stimuli for the focus groups with pregnant women. The intercept survey interview guide and in-depth interview guide are also included. We do not at this time have the final interview guides for the the focus groups or for the beta testing.

Financial Conflict of Interest Disclosure (non-student investigators only)

In order to fulfill the requirements of federal regulations, investigators conducting research involving human participants at Cornell must disclose known *significant financial interests* that would reasonably appear to be affected by the research project. Significant financial interests include:

- An equity interest that, when aggregated for the investigator and the investigator's spouse and dependent children exceeds $10,000 in value, or represents more than 5% ownership interest in a single entity
- Salary, royalties, or other payments that, when aggregated for the investigator and the investigator's spouse and dependent children over the next twelve months are expected to exceed $10,000

1. Have you and all key *faculty* personnel on this project completed the Annual Disclosure Statement? Yes ☐No
2. Have you and all key personnel disclosed all significant financial interests (including those of spouses and dependent children) that would reasonably appear to be affected by this research project? ☒ Yes ☐ No
3. Do any of the investigators, their spouses or dependent children; have any significant financial interests that would reasonably appear to be affected by this research? ☐ Yes ☒ No
4. Do any of the investigators, their spouses or dependent children, have any financial interest or other relationship with any company or entity that sponsors or supports this research? ☐ Yes ☒ No

If you answered Yes to either #3 or #4, the Chair of IRB must receive a letter from your dean or director stating in summary form how any potential financial conflict of interest involving this research project has been reduced, managed or eliminated. *The IRB is not able to review this project until receipt of the dean's/director's letter.* Please address the letter to: IRB Chair, ORIA, 395 Pine Tree Road, Suite 320. Ithaca, New York 14850.

Approximate date the IRB Chair can expect to receive the letter: _____

Final Reminder!

When applicable, attach copies of:

Sponsored funding proposal
Thesis/dissertation proposal
Recruitment materials
Consent/assent documents (including oral consent)
Surveys/questionnaires/interview scripts
Debriefing form/script
Restricted/limited access dataset agreements
Confirmation of review by other IRBs
Foreign country collaboration documentation

Review of your application will be delayed if you do not submit the correct number of copies or the requested study instruments.

Signature Page

This page is to be signed by the investigator(s). If the investigator is an undergraduate, graduate student, or doctoral student, the faculty supervisor must also sign in the lower box.

Investigator(s)

I certify that the information I provide in this application is correct and complete. **I also pledge that I will not change any of the procedures, forms, or protocols used in this study without first seeking review and approval from the Institutional Review Board – Human Participants**

Signature of Investigator (1)	Date
Signature of Investigator (2)	Date

Faculty Supervisor:

NOTE: A research proposal by a graduate or undergraduate student **must** have the following statement signed by a faculty supervisor.

"I have examined this completed form and I am satisfied with the adequacy of the proposed research design and the measures proposed for the protection of human subjects. I will take responsibility for informing the student of the need for the safekeeping of all raw data (e.g., test protocols, tapes, questionnaires, interview notes, etc.), as well as signed consent forms, in a University office or computer file."

Print Name and Title of Faculty Supervisor Supervisor	Signature of Faculty
Date	Office Phone

Please also attach a letter describing how you will provide continuing supervision over the student. Review of the proposal will begin after receipt of your letter.

Cornell University
Office of
Research Integrity and Assurance

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Ithaca, NY 14850
p. 607-255-5138
f. 607-255-0758
www.irb.cornell.edu

Institutional Review Board for Human Participants

NOTICE OF EXPEDITED APPROVAL

To:	Christine Olson
From:	Jenny Gerner, IRB Chairperson
Protocol ID#:	1001001144
Project(s):	Formative Research on Electronically-Mediated Weight Interventions for Pregnant Women
Date of Approval:	February 23, 2010
Expiration Date:	February 22, 2011

The above-referenced protocol has been reviewed and given expedited approval by the Institutional Review Board for Human Participants (IRB) for the inclusion of human participants in research. **This approval shall remain in effect until February 22, 2011.**

The terms of Cornell University's Federalwide Assurance (FWA) with the federal government mandate the following important conditions for investigators:

1. All consent forms, records of study participation, and other consent materials **must** be held by the investigator for **five years** after the close of the study.
2. Investigators must submit to the IRB any **proposed amendment** to the study protocol, consent forms, interviews, recruiting strategies, and other materials. Investigators may not use these materials with human participants until the IRB has reviewed them. For information about study amendment procedures and access to the Amendments application form, please refer to the IRB website: http://www.irb.cornell.edu/forms.
3. Investigators must promptly report to the IRB any **unexpected events** involving human participants. The definition of prompt reporting depends upon the seriousness of the unexpected event. For guidance on recognizing, defining, and reporting unexpected events to the IRB, please refer to the IRB website: http://www.irb.cornell.edu/forms.

If the use of human participants is to continue beyond the assigned approval period, federal requirements mandate that the protocol be re-reviewed and receive an updated approval. **You may not continue to use information collected from human participants beyond the stated approval period without an updated approval**. Please note that the terms of our FWA with the federal government do not allow for an extension of this period without review. Continuing without an updated approval constitutes a violation of University policy and federal regulations. Research funds administered by the Office of Sponsored Programs will not be released to any project that does not have a current IRB approval.

Federal regulations require that all research be reviewed at least annually. As the Principal Investigator it is your responsibility to obtain review and continued approval ***before*** the expiration date. Applications for renewal of approval must be submitted sufficiently in advance of the expiration date to permit the IRB to

conduct its review before the current approval expires. Please allow three weeks for the review.

Note: Forms should be downloaded from the IRB website at www.irb.cornell.edu/forms for each use.

****If you do not plan to renew your protocol approval at the end of the year, you must provide the IRB with a Project Closure form. A link to the Project Closure form can be found at http://www.irb.cornell.edu/forms/.**

Revision: **11/09/2007**

REQUEST TO AMEND
A PREVIOUSLY-APPROVED PROJECT

CORNELL UNIVERSITY
Institutional Review Board – Human Participants

- **All information must be typed. Handwritten applications are not accepted by the IRB.**
- **Attach a copy of all amended/final instruments, *highlighting the changes* from the previously reviewed and approve instruments.**
- **Submit this form, with appropriate signatures and necessary attachments, to: IRB - ORIA, 395 Pine Tree Road, Suite 320, Ithaca NY 14850**

Project Identification:

Title of Research Project *(use same title under which project was approved)*

Formative Research on Electronically-Mediated Weight Interventions for Pregnant Women

Protocol ID# (found on latest approval letter): **1001-001-144**

Investigator's Name: **Christine Olson**

Campus Address: **376 MVR Hall, College of Human Ecology**

Investigator's Signature: _____

Signature of faculty member supervising project (if applicable): _____

_____

Date of request: **September 23, 2010**

Anticipated End Date of Project: **April 1, 2011**

Information on Amendments

1. What type(s) of amendment(s) are you requesting? Please describe in detail.

Focus Groups with Postpartum Women- We will conduct a maximum of two focus group sessions each with six distinct subpopulations of the postpartum women recruited from participating clinics and private practices in Rochester, NY. For recruitment, we will collaborate with the Perinatal Network of Monroe County's Healthy Start Center program that provides services and education to low income, minority pregnant women and young families. In addition, we will work with private practices and hospital-affiliated clinics in the recruitment of higher income women. We will also work with the Child Care Council Inc. of Monroe county to recruit portpartum women of both low and higher income. We anticipate that the subgroups will be (1) Six weeks-six months postpartum & low-income; (2) Six weeks-six months postpartum & high-income (3) Six - twelve months postpartum & low-income; (4) Six -twelve months postpartum & high-income; (5) Twelve-eighteen months postpartum & low-income; (6) Twelve-eighteen months postpartum & high-income, totaling approximately 12 focus group sessions (6 subgroups x 2 sessions for each subgroup). Each focus group will include 4 to 6 participants for a total of 48 to 72 women. The focus groups will be conducted by a trained and experienced moderator following the guidelines of Krueger in locations that are convenient for women in Rochester, NY (eg. Child Care Council, Clinics, WIC). They will be audio-taped, transcribed, and analyzed using standard qualitative data analysis methods such as the constant comparative method. We have attached an outline of a

proposed focus group guide. As in the pregnancy focus groups, for partitipation in the focus groups postpartum women will receive $40.

2. Briefly describe the reason(s) you are making amendment(s) to the study.

   In order to develop the postpartum intervention for our project we need to conduct focus groups with postpartum women and are ready to do so at this point in time.

3. Are any of these changes the result of something that occurred during human participant interaction?
   ☐ Yes ☒ No

   If Yes, please describe the event(s): _____

4. Are you submitting, for IRB approval, revisions of or new study interviews, questionnaires, study guides, or debriefing forms? ☒ Yes (please attach) ☐ No

5. Are you submitting, for IRB approval, final forms of study protocols that were reviewed in draft form?
   ☐ Yes (please attach) ☒ No

6. Are you submitting, for IRB approval, a revised version of or a new informed consent document or procedure?
   ☒ Yes (please attach) ☐ No

7. Are you submitting, for IRB approval, any other change in study procedures, such as design, designation of principal investigator, change in the recruitment techniques, etc.? ☐ Yes ☒ No

   If Yes, please describe those changes and attach documentation (as necessary).

   _____

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f. 607-255-0758
www.irb.cornell.edu

Institutional Review Board for Human Participants

NOTICE OF EXPEDITED AMENDMENT APPROVAL

To:	Christine Olson
From:	Jenny Gerner, IRB Chairperson
Protocol ID#:	1001001144
Project(s):	Formative Research on Electronically-Mediated Weight Interventions for Pregnant Women
Date of Approval:	October 26, 2010
Expiration Date:	February 22, 2011

The above-referenced protocol amendment request has been reviewed and given expedited approval by the Institutional Review Board for Human Participants (IRB) for the inclusion of human participants in research. **This approval shall remain in effect until February 22, 2011.**

This approval covers the following change(s)/modification(s):

- Focus groups with postpartum women: Perinatal Network of Monroe County's Healthy Start Center Program and Unity Health System.

If you requested modifications to a consent form(s):

- Use only the modified form for additional subject enrollment.
- Include on the form the date of this notification for the revised IRB approval date.

If you submitted revised/final versions of interview guides, questionnaires, or debriefing scripts, you have approval to use these materials immediately.

All other study procedures/instruments are to remain unchanged from the original submission and IRB approval.

Note: Forms should be downloaded from the IRB website at www.irb.cornell.edu/forms for each use.

Revision: **11/09/2007**

REQUEST TO AMEND
A PREVIOUSLY-APPROVED PROJECT

CORNELL UNIVERSITY
Institutional Review Board – Human Participants

- **All information must be typed. Handwritten applications are not accepted by the IRB.**
- **Attach a copy of all amended/final instruments, *highlighting the changes* from the previously reviewed and appr instruments.**
- **Submit this form, with appropriate signatures and necessary attachments, to: IRB - ORIA, 395 Pine Tree Roa Suite 320, Ithaca NY 14850**

Project Identification:

Title of Research Project *(use same title under which project was approved)*

Formative Research on Electronically-Mediated Weight Interventions for Pregnant Women

Protocol ID# (found on latest approval letter): **1001-001-144**

Investigator's Name: **Christine Olson**

Campus Address: **376 MVR Hall, College of Human Ecology**

Investigator's Signature: _____

Signature of faculty member supervising project (if applicable): _____

_____

Date of request: **October 28, 2010**

Anticipated End Date of Project: **April 1, 2011**

Information on Amendments

1. What type(s) of amendment(s) are you requesting? Please describe in detail.

   In-Depth Interviews with Postpartum Women- We will conduct 20-25 semi-structured interviews with postpartum women recruited from participating clinics and private practices in Rochester, NY. For recruitment, we will collaborate with the Perinatal Network of Monroe County's Healthy Start Center program that provides services and education to low income, minority pregnant women and young families. In addition, we will work with private practices and hospital-affiliated clinics in the recruitment of higher income women. We will also work with the Child Care Council Inc. of Monroe county to recruit portpartum women of both low and higher income. Each interview will include 4 to 6 participants for a total of 48 to 72 women. The interviews will be conducted in locations that are convenient for women in Rochester, NY (eg. Child Care Council, Center for Community Health, WIC). These interviews will last 20 to 40 minutes. They will be audio-taped, transcribed, and analyzed using standard qualitative data analysis methods such as the constant comparative method. We have attached a draft interview guide for the semi-structured in-depth interviews As in the pregnancy interviews, for partitipation women will receive $25.

   We would also like to add JP Pollak and Rebecca Robbins to our IRB Protocol as members of the research team. Both are from the Department of Communications at Cornell University.

2. Briefly describe the reason(s) you are making amendment(s) to the study.

In order to develop the postpartum intervention for our project we need to conduct interviews with postpartum women and are ready to do so at this point in time.

3. Are any of these changes the result of something that occurred during human participant interaction?
☐ Yes ☒ No

   If Yes, please describe the event(s): _____

4. Are you submitting, for IRB approval, revisions of or new study interviews, questionnaires, study guides, or debriefing forms? ☒ Yes (please attach) ☐ No

5. Are you submitting, for IRB approval, final forms of study protocols that were reviewed in draft form?
☐ Yes (please attach) ☒ No

6. Are you submitting, for IRB approval, a revised version of or a new informed consent document or procedure?
☒ Yes (please attach) ☐ No

7. Are you submitting, for IRB approval, any other change in study procedures, such as design, designation of principal investigator, change in the recruitment techniques, etc.? ☐ Yes ☒ No

   If Yes, please describe those changes and attach documentation (as necessary).

   _____

Cornell University
Office of
Research Integrity and Assurance

East Hill Office Building, Suite 320
395 Pine Tree Road
Ithaca, NY 14850
p. 607-255-5138
f. 607-255-0758
www.irb.cornell.edu

Institutional Review Board for Human Participants

NOTICE OF EXPEDITED AMENDMENT APPROVAL

To:	Christine Olson
From:	Jenny Gerner, IRB Chairperson
Protocol ID#:	1001001144
Project(s):	Formative Research on Electronically-Mediated Weight Interventions for Pregnant Women
Date of Approval:	November 23, 2010
Expiration Date:	February 22, 2011

The above-referenced protocol amendment request has been reviewed and given expedited approval by the Institutional Review Board for Human Participants (IRB) for the inclusion of human participants in research. **This approval shall remain in effect until February 22, 2011.**

This approval covers the following change(s)/modification(s):

- In-depth interviews with post-partum women.
- Recruited from participating clinics and private practices in Rochester, NY.
- For recruitment we will collaborate with the Perinatal Network of Monroe County's Healthy Start Center program, and the Child Care Council Inc. of Monroe County
- 20-40 minute interviews will be audiotaped, transcribed and analyzed using standard qualitative data analysis methods.
- Participants will receive $25.
- Draft Interview attached.
- Adding JP Pollak, and Rebecca Robbins to protocol.
- This approval is contingent once letter of support is received from WIC for recruitment, and research at that organization

If you requested modifications to a consent form(s):

- Use only the modified form for additional subject enrollment.
- Include on the form the date of this notification for the revised IRB approval date.

If you submitted revised/final versions of interview guides, questionnaires, or debriefing scripts, you have approval to use these materials immediately.

All other study procedures/instruments are to remain unchanged from the original submission and IRB approval.

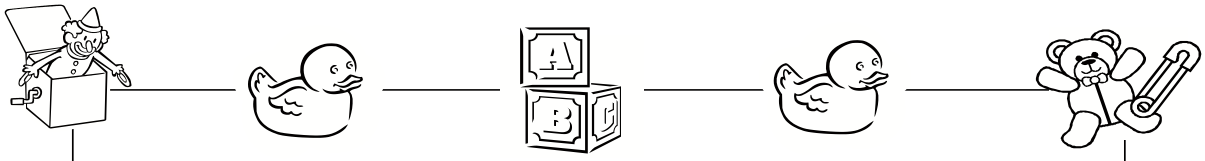
Note: Forms should be downloaded from the IRB website at www.irb.cornell.edu/forms for each use.

Are you pregnant? Want to earn $40?

We are looking for pregnant women to participate in an hour and a half long discussion about health during pregnancy. If you are between the ages of 18 and 35, you may eligible to participate. Participants in the discussion will receive $40 for their time, at the end of the discussion. To get more information, please call 1-866-361-4600 or e-mail mlg22@cornell.edu.

Discussions will be held at the Child Care Council with 8 to 10 women at times that are convenient for all. Childcare will be provided during the focus group.

The e-Moms of Rochester Project Staff
A Cornell University & University of Rochester Project



Do you have a toddler or infant?

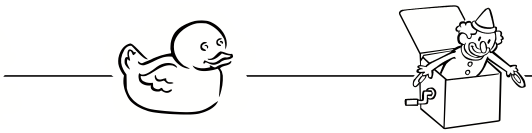
We are looking for women that have a baby between six weeks to eighteen months of age to participate in an hour and a half long discussion about priorities and health. If you are between the ages of 18 and 35, you may eligible to participate. Participants in the discussion will receive $40 for their time, at the end of the discussion.

To get more information, please call 1-866-361-4600 or e-mail mlg22@cornell.edu.

Discussions will be held with 4 to 6 women at times that are convenient for all.

The e-Moms of Rochester Project Staff
A Cornell University & University of Rochester Project

This poster has been approved by the Cornell University Institutional Review Board for Human Subjects Protocol #: 1001001144



Mom Focus Group 1-866-361-4600 mlg22@cornell.edu	Mom Focus Group 1-866-361-4600 mlg22@cornell.edu	Mom Focus Group 1-866-361-4600 mlg22@cornell.edu	Mom Focus Group 1-866-361-4600 mlg22@cornell.edu	Mom Focus Group 1-866-361-4600 mlg22@cornell.edu	Mom Focus Group 1-866-361-4600 mlg22@cornell.edu	Mom Focus Group 1-866-361-4600 mlg22@cornell.edu

e-Moms of Rochester Study Consent Form: Focus Group

You are being asked to take part in a research study to identify which means of electronic communication (for example, computers and cell phones) are most available to women and most useful for getting health information to them. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

What the study is about: The purpose of this study is to develop materials for an electronic education program for pregnant women. To participate you must be between the ages of 18 and 35 years of age and pregnant.

What we will ask you to do: If you agree to be in this study, you will participate in a discussion about 1 ½ hours in length with 4 to 6 other women who are similar to you. For the discussion, we will look at some newsletters and information on diet, physical activity and weight in pregnancy and ask you to tell us what you think of the ideas and the materials. With your permission, we will audio tape-record the focus group.

Risks and benefits: I do not anticipate any risks to you participating in this study other than those encountered in normal, day-to-day life.

There are no direct benefits to you. Society might benefit from this study if the materials we develop help pregnant women and their babies to be healthier.

Compensation: You will receive $40 after completing the discussion.

Your answers will be confidential. The records of this study will be kept private. In any sort of report we make public we will not include any information that will make it possible to identify you. Research records will be kept in a locked file; only the researchers will have access to the records. The results of the study will be shared with faculty at the University of Rochester. If we tape-record the interview, we will destroy the tape after it has been transcribed and used to create project materials, which we anticipate will be within three years of its taping.

Taking part is voluntary: Taking part in this study is completely voluntary. You may choose not to discuss certain questions. If you decide not to take part or to skip some of the questions, it will not affect your current or future relationship with Cornell University. If you decide to take part, you are free to withdraw at any time.

If you have questions: The researchers conducting this study are Meredith Graham and Professor Christine Olson of the Division of Nutritional Sciences, Cornell University. Please ask any questions you have now. If you have questions later, you may contact Meredith Graham at mlg22@cornell.edu or at 1-866-361-4600. You can reach Prof. Olson at cmo3@cornell.edu or 607-255-2534 or 1-866-361-4600. If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Institutional Review Board (IRB) at 607-255-5138 or access their website at http://www.irb.cornell.edu. You may also report your concerns or complaints anonymously through Ethicspoint or by calling toll free at 1-866-293-3077.

Ethicspoint is an independent organization that serves as a liaison between the University and the person bringing the complaint so that anonymity can be ensured.

You will be given a copy of this form to keep for your records.

Statement of Consent: I have read the above information, and have received answers to any questions I asked. I consent to take part in the study.

Your Signature _____Date_____

Your Name (printed) _____

In addition to agreeing to participate, I also consent to having the interview tape-recorded.

Your Signature _____Date _____

Signature of person obtaining consent _____Date _____

Printed name of person obtaining consent _____Date _____

This consent form will be kept by the researcher for at least three years beyond the end of the study and was approved by the IRB on February 23, 2010.

e-Moms of Rochester Study Consent Form: Focus Group

You are being asked to take part in a research study to determine the priorities of women after having a baby and how health fits in with those priorities and behavior. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

What the study is about: The purpose of this study is to develop materials for an electronic education program for postpartum women. To participate you must be between the ages of 18 and 35 years of age and have a baby that is six weeks to eighteen months old.

What we will ask you to do: If you agree to be in this study, you will participate in a discussion about 1 ½ hours in length with 4 to 6 other women who are similar to you. With your permission, we will audio tape-record the focus group.

Risks and benefits: I do not anticipate any risks to you participating in this study other than those encountered in normal, day-to-day life.

There are no direct benefits to you. Society might benefit from this study if the materials we develop help pregnant women and their babies to be healthier.

Compensation: You will receive $40 after completing the discussion.

Your answers will be confidential. The records of this study will be kept private. In any sort of report we make public we will not include any information that will make it possible to identify you. Research records will be kept in a locked file; only the researchers will have access to the records. The results of the study will be shared with faculty at the University of Rochester. If we tape-record the interview, we will destroy the tape after it has been transcribed and used to create project materials, which we anticipate will be within three years of its taping.

Taking part is voluntary: Taking part in this study is completely voluntary. You may choose not to discuss certain questions. If you decide not to take part or to skip some of the questions, it will not affect your current or future relationship with Cornell University. If you decide to take part, you are free to withdraw at any time.

If you have questions: The researchers conducting this study are Meredith Graham and Professor Christine Olson of the Division of Nutritional Sciences, Cornell University. Please ask any questions you have now. If you have questions later, you may contact Meredith Graham at mlg22@cornell.edu or at 1-866-361-4600. You can reach Prof. Olson at cmo3@cornell.edu or 607-255-2534 or 1-866-361-4600. If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Institutional Review Board (IRB) at 607-255-5138 or access their website at http://www.irb.cornell.edu. You may also report your concerns or complaints anonymously through Ethicspoint or by calling toll free at 1-866-293-3077. Ethicspoint is an independent organization that serves as a liaison between the University and the person bringing the complaint so that anonymity can be ensured.

You will be given a copy of this form to keep for your records.

Statement of Consent: I have read the above information, and have received answers to any questions I asked. I consent to take part in the study.

Your Signature _____Date_____

Your Name (printed) _____

In addition to agreeing to participate, I also consent to having the interview tape-recorded.

Your Signature _____Date _____

Signature of person obtaining consent _____Date _____

Printed name of person obtaining consent _____Date _____

This consent form will be kept by the researcher for at least three years beyond the end of the study and was approved by the IRB on February 23, 2010.

The e-Moms of Rochester Study Consent Form: In-depth Interview

You are being asked to take part in a research study to better understand who women rely on and what they rely on others for and how we might develop a website to support new mothers in the greater Rochester area. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

What the study is about: The purpose of this study is to develop materials for an electronic education program for postpartum women. To participate you must be between the ages of 18 and 35 years of age and have a child between the ages of 6 weeks to 18 months old.

What we will ask you to do: If you agree to be in this study, you will participate in a 20-40 minute interview with a staff member of Cornell University about who you rely on and what you rely on others for and how we might develop a website to support new mothers in the greater Rochester area and with your permission, we will audio tape-record the interview.

Risks and benefits: I do not anticipate any risks to you participating in this study other than those encountered in normal, day-to-day life.

There are no direct benefits to you. Society might benefit from this study if the materials we develop help pregnant women and their babies to be healthier.

Compensation: You will receive $25 after completing the interview.

Your answers will be confidential. The records of this study will be kept private. In any sort of report we make public we will not include any information that will make it possible to identify you. Research records will be kept in a locked file; only the researchers will have access to the records. The results of the study will be shared with faculty at the University of Rochester. If we tape-record the interview, we will destroy the tape after it has been transcribed and used to create project materials, which we anticipate will be within three years of its taping.

Taking part is voluntary: Taking part in this study is completely voluntary. You may skip any questions that you do not want to answer. If you decide not to take part or to skip some of the questions, it will not affect your current or future relationship with Cornell University. If you decide to take part, you are free to withdraw at any time.

If you have questions: The researchers conducting this study are Meredith Graham and Professor Christine Olson of the Division of Nutritional Sciences, Cornell University. Please ask any questions you have now. If you have questions later, you may contact Meredith Graham at mlg22@cornell.edu or at 1-866-361-4600. You can reach Prof. Olson at cmo3@cornell.edu or 607-255-2534 or 1-866-361-4600. If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Institutional Review Board (IRB) at 607-255-5138 or access their website at http://www.irb.cornell.edu. You may also report your concerns or complaints anonymously through Ethicspoint or by calling toll free at 1-866-293-3077. Ethicspoint is an independent organization that serves as a liaison between the University and the person bringing the complaint so that anonymity can be ensured.

You will be given a copy of this form to keep for your records.

Statement of Consent: I have read the above information, and have received answers to any questions I asked. I consent to take part in the study.

Your Signature _____Date_____

Your Name (printed) _____

In addition to agreeing to participate, I also consent to having the interview audio-recorded.

Your Signature _____Date _____

Your Name (printed) _____

Signature of person obtaining consent _____Date _____

Printed name of person obtaining consent _____Date _____

This consent form will be kept by the researcher for at least three years beyond the end of the study and was approved by the IRB on November 23, 2010.

eMoms of Rochester
Prenatal Focus Group Guide

Introduction

Hello. I would like to welcome you all here today and thank you for coming. My name is (*facilitator's name*). My colleague's name is (*observer's name*). We are from Cornell University in Ithaca and are working with the University of Rochester on a project for pregnant women and new mothers. The first part of the project involves working with pregnant women to help them stay healthy throughout their pregnancy.

Our discussion is strictly confidential, so we hope that you'll feel comfortable sharing your opinions and experiences. We are recording our conversation today and my colleague (*observer's name*) will be writing down some notes to keep track of what we talk about here today, but your name and identity will not be use in any report. There are no right answers to any of our questions. We are here to learn from you, as expectant mothers.

Before we begin, I would like to make some suggestions that will guide our conversation today. Only one person should speak at a time, but feel free to talk to each other. There is a tendency during these discussions for some people to talk a lot and for some people not to. It is important for us to hear from each of you because you have different experiences. So if one of you is sharing a lot, I may ask you to let others talk. And if you aren't saying much, I may ask you for your opinion. This discussion should last between one and a half to two hours. Please put your phone on vibrate so that we can have an uninterrupted conversation.

Directions to the restroom.

Opening Question

1. I'd like us to go around and introduce ourselves and say what is your expected due date and whether this is your first baby or not.

Introductory Questions

2. What are some of the things you are thinking more about now that you are pregnant compared to before you were pregnant?

   ALT: How, if at all, have your personal priorities shifted now that you are pregnant?

3. Would connecting with other pregnant women help you with these priorities?

   FOLLOW-UP: If so, how would you prefer to connect with them?

4. Considering all of those priorities, how do you feel about your health fitting in to those things?

ALT: Considering all of those priorities, how would you rank your health among all of those things?

5. What does it mean to you to be healthy during pregnancy?

   ALT: What things do you think about when you think about what it means to be healthy during pregnancy?

6. Where do you go for information about health during pregnancy?

   FOLLOW-UP: What information has been helpful to you?

Transition Questions

7. How does the weight you're gaining fit in with being healthy during pregnancy?

   ALT: I'm going to transition now from talking just about health to talking about how the weight that you're actually gaining now as part of your pregnancy fits in with being healthy during pregnancy.

Key Questions

8. What have you heard about how much weight to gain during pregnancy?

   FOLLOW-UP: Where did you hear this?

   FOLLOW-UP: What have you heard about gaining weight during pregnancy from people other than health care providers?

   FOLLOW-UP: How do you feel about gaining the amount that was recommended?

   FOLLOW-UP: How do you feel about gaining more than that?

      [If the women do not seemed concerned, then PROBE…]

      PROBE: Are there any reasons to change your mind about that?

         i. How about any of the things you've heard about from the other women?

9. What do you think influences or determines how much a woman gains during pregnancy?

   [If not mentioned, then PROBE…]

   PROBE: How does what a woman eats fit in with gaining weight?

      FOLLOW-UP: What are ways a woman can control the amount she eats?

      FOLLOW-UP: How has your diet changed since you have been pregnant?

PROBE: How does a woman's physical activity fit in with gaining weight?

Transition Question

10. I'm going to transition the conversation again and ask everyone to think about a time when you have made a change in your habits to be healthier or to think about a change you might want to make in the future.

    ALT: I'm going to transition the conversation again and ask everyone to think about a time when you have made a change in your habits to eat better or to be more active or to think about a change you might want to make in the future.

    PROBE: What about starting to eat new foods? Or stop eating certain foods? Or changed the amount of food that you eat?

Key Questions

11. What prompted you or is prompting you to try these things?

    ALT: What made you or is making you decide to try these things?

12. What sort of things made it difficult to make the changes you did?

    ALT: For those of you thinking about making a change, what sort of things do you think might make it difficult?

13. What sort of things helped you or would help you to make this change?

    [If women do not mention one of the following, then PROBE…]

    PROBE: Has anyone reached out to other people to help them make this change? How did they help you?

        FOLLOW-UP: How would that work for everyone else?

        FOLLOW-UP: What do you think about looking for support from people who are not friends or family? How could other people be helpful?

    PROBE: Has anyone used how-to tips? How did that work?

        FOLLOW-UP: How would that work for everyone else?

    PROBE: Has anyone read, listened to or watched someone else's experience about making the same kind of change? What did you think of that?

        FOLLOW-UP: How would that work for everyone else?

    PROBE: Has anyone set small goals to help achieve your bigger lifestyle goal? How did that work?

FOLLOW-UP: How would that work for everyone else?

PROBE: As part of setting goals, has anyone tracked their behaviors using some sort of website, log or diary or phone application? How did that work?

FOLLOW-UP: How would that work for everyone else?

PROBE: Has anyone given themselves some type of reward after they've reached a goal, either a small goal or your big goal? How did that work?

FOLLOW-UP: How would that work for everyone else?

14. In our previous project, we sent newsletters out to pregnant women that covered a variety of topics meant to help women be healthy during pregnancy. In front of you is one of our newsletters. It's about eating more fruits and vegetables during pregnancy. We tried to include several of the things we were just talking about. Now, we would like to get your opinion on these things to see if they would be helpful to you.

PROBE: What do you think about the section, "A Quick Way to 5 a Day?" This is an example of some how-to tips for eating more fruits and vegetables.

PROBE: What do you think about the section, "Carla's Story?" This is a quote from a real woman who was talking about her experience during pregnancy.

PROBE: What do you think about the section, "Health Check Activity?" This is an example of a tool to help you track your eating behaviors and set a small goal to eat more fruits and vegetables.

15. The other piece of paper in front of you is the Weight Gain tracker card that we sent to women in our previous project. It's a tool to help you figure out how much weight you should try to gain based on your height and weight and to help you track how much you are gaining. Every time you get weighed, you can enter that weight on this card to see if you are staying in the right range.

PROBE: What do you think about this weight-tracking tool?

PROBE: How useful would something like this be?

Ending Questions

16. We would like to create a new program that would be some type website, phone application, or texting system instead of paper newsletters. What advice would you give us to make this something women like you would want to use?

    a. Which type of system are you most likely to use?
       PROBE: Tell me more about that.

17. As part of this program, we would be gathering some information from our participants via online surveys. The surveys will take 30-45 minutes to complete twice during pregnancy, once in early pregnancy and once towards the end of pregnancy. What type of incentives would you want for completing these surveys?

    [Probe about these types of examples]

    a. Would you like something small like a bib or onesie or would you like to receive small amounts of money as cash or giftcards?

    b. Would you like to receive something small after every survey or would you like to receive points that you can save to redeem something larger at the end? Or would you like some combination of those two things?

eMoms of Rochester
Postpartum Focus Group Guide

Introduction
Hello. I would like to welcome you all here today and thank you for coming. My name is (*facilitator's name*). My colleague's name is (*observer's name*). We are from Cornell University in Ithaca and are working with the University of Rochester on a project for pregnant women and new mothers. Part of the project involves working with new mothers to help them be healthy as they're taking care of their new baby.

Our discussion is strictly confidential, so we hope that you'll feel comfortable sharing your opinions and experiences. We are recording our conversation today and my colleague (*observer's name*) will be writing down some notes to keep track of what we talk about here today, but your name and identity will not be used in any report. There are no right answers to any of our questions. We are here to learn from you, as new mothers.

Before we begin, I would like to make some suggestions that will guide our conversation today. Only one person should speak at a time, but feel free to talk to each other. There is a tendency during these discussions for some people to talk a lot and for some people not to. It is important for us to hear from each of you because you have different experiences. So if one of you is sharing a lot, I may ask you to let others talk. And if you aren't saying much, I may ask you for your opinion. This discussion should last between one and a half to two hours. Please put your phone on vibrate so that we can have an uninterrupted conversation.

Directions to the restroom and water.

Opening Question

1. To start with, I'd like us all to go around the room and introduce ourselves and say how old your baby is and if you have other children how old your other children are

Introductory Questions

2. You've added a new person to your family. How, if at all, has that changed your life and your priorities?

   FOLLOW-UP: How have these priorities shifted from when your baby was less than 6 months old? Your baby was less than 12 months old?

3. Thinking back to the priorities that we talked about initially, **where** does your personal health fit in among these priorities?

Key Questions

4. If you're thinking about your own health, what do you think of if you were to prioritize the things related to your health? Is there one particular thing that you would focus on?
   What are your major priorities when it comes to your health? Are there any other priorities for your personal health?

FOLLOW-UP: What are your priorities for your baby's health?

5. How have you dealt with your personal health priorities since you had your baby?

   (If they have already mentioned diet and physical activity changes, use later questions as probes and sort of merge the two sections together.)

   FOLLOW-UP: For those that have turned attention to them: When did you start working on them? For those that have not yet turned attention to them: When do you think you will start trying to work on them? Why then?

6. Did you make any changes during your pregnancy to be healthier?

   FOLLOW-UP: Are you still doing those things? Why or why not?

Transition Question

I'd like to transition again and talk specifically about diet and physical activity and how well you are able to keep up with healthy habits.

7. How important is it to eat a healthy diet right now?

   FOLLOW-UP: What are some of the important reasons for eating healthfully?

Key Questions

8. How has your diet changed, if at all, since you had your baby? Since your baby was 6 months old? Since your baby was 12 months old?

9. What are some of the things that make it difficult to eat a healthy diet after you've had a baby?

10. What are some of the things that would make it easier for you personally to eat a healthy diet after you've had a baby?

11. How important is it to be physically active?

    FOLLOW-UP: What are some of the important reasons for being physically active?

12. How has your physical activity changed, if at all, since you had your baby? Since your baby was 6 months old? Since your baby was 12 months old?

13. What are some of the things that make it difficult to be physically active?

14. What are some of the things that would make it easier for you to be physically active?

Transition Questions

I'd like to transition now and talk about the weight that you gained during your pregnancy and how that fits in with your health at this point.

15. How do you feel about the weight you gained during pregnancy?

16. How do you feel any changes in your weight since you had your baby?

Key Questions

17. What do you think influences weight and weight loss at this point (6 wks-6 months, 6 months-12 months, 12 months-18 months)?

18. How important is it to you to lose all the weight you gained during pregnancy? How come you feel this way?

    FOLLOW-UP: How important is it to other new mothers that you know? Why do you think they feel the way they do?

19. How long should it take, if anytime at all, to lose baby weight?

20. What are some effective strategies that you think women can use to lose the weight gained during pregnancy?

    FOLLOW-UP: When should a woman start using some of the strategies we just heard about to lose the weight she gained during pregnancy?

Ending Questions

21. As I mentioned before, we are developing a program to provide women with some tools and information about being a new mom and about leading healthy lifestyles. Our program will ask women to visit our website periodically, receive text/e-mail messages from us and provide mobile web applications. How long after having a baby do you think you would be interested in viewing our website? How about receiving text messages? E-mail messages? How about using a mobile web application?

    FOLLOW-UP: Would this be different if you had been using the website during your pregnancy?

    FOLLOW-UP: How often do you think would and/or could visit this same website? And/or read text messages from us? And/or receive e-mail messages from us?

22. Would you be interested in interacting with other new mothers from Rochester online?

    FOLLOW-UP: How would you like to interact? (Facebook, Discussion groups, Meet-up groups, Resource sharing, Direct contact, Reading blogs or watching videos)?

23. What types of activities, tools, information would entice to you keep coming back to the website? Reading text or e-mail messages? For 18 months?

Questionnaire for participants to fill-out while waiting:

Media Usage

Do you own a cell phone?
Yes
No, but I share or have access to a cell phone
No (Skip next question)

Is the cell phone that you own or use a smartphone?
(A mobile phone that offers functions that are normally found on a computer. Examples: iphone, android, blackberry, nexus one, sidekick, treo, or palm.)
Yes
No

How often do you send or receive text messages on a cell phone?
Never or hardly ever
A few times a month
A few times a week
A couple of times a day
Many times a day

How often do you access the internet?
Never
Less than once a week
A few times a week
Most days of the week
Everyday

How often do you use the internet to connect to social networking sites like Facebook, MySpace, LinkedIn or Twitter?
Never
Less than once a week
A few times a week
Most days of the week
Everyday

Do you visit any websites or use any applications that relate to being a new mother?
Yes (Please list the names of the sites/apps that you use: _____)
No

Infant Feeding

Are you currently feeding breast milk to your baby?
Yes
No

Did you ever feed breast milk to your baby?
Yes (How long did you/have you been feeding breast milk?_____)
No

In-Depth Interview Objectives

-To understand women's social support networks including who women rely on, what do women rely on them for, any changes to social support networks at each stage postpartum, and willingness to seek out additional social support through the intervention.
-To also understand women's social support for diet and physical activity.
-To understand in what ways and for what reasons women currently interact with other people (particularly people they do not know personally) on the internet through social websites, blogs, listservs etc and what features of the online media that women prefer and utilize.
-To also understand interactions with other mothers using parenting-centric websites and/or list-servs.
-To elicit information about the following: Given that our site will not allow women to connect to their existing friends and family, what elements should a website include that they would want to visit? Topics to cover?

Introduction
Welcome, and thank you for agreeing to talk with me today. My name is _____ and I am working on a joint project with Cornell University and the University of Rochester. Our intention is to better understand who women rely on and what they rely on others for and how we might develop a website to support new mothers in the greater Rochester area.

As we mentioned in our recruitment flyer and over the phone, our project is designed for women between the ages of 18 and 35. I just want to confirm that you fit into that age range?

Great. We will be recording this conversation so that none of the information you provide will be omitted. Your name will never be associated with the information you share in any reports or publications. We expect that this discussion will last for 25 to 35 minutes. When we are finished, you will be paid $25 in appreciation of your time.

With that in mind, let's get started.
(Hand out Perceived Social Support Scale and request participant complete the scale).

1. First of all, how old is your child? Is this your first child? How old are your other children?

2. Do you have any friends or family with children the same age that are going through some of the same stuff that you are? Tell me a little bit about that.

3. Who do you rely on when you need help with these priorities or other things in your life?

   FOLLOW-UP: Who helps you get through the day-to-day things you need to do in your life?

   Who gives you advice that is useful?

Who understands your private worries and feelings?

Who do you like to do fun things with? (Clarify it isn't about going out and spending money)

4. In what ways do other people encourage and help you to eat well? (Probe for who this is)

5. How do other people make it hard to eat well? (Probe for who this is).

6. In what ways do other people encourage and help you to be physically active? (Probe for who this is)

7. How do other people sometimes make it hard to be physically active? (Probe for this is)

8. How have the people or the ways that people help you changed since you had a baby?

   PROBE: Have you met new people? Where did you meet them? Have you joined any mom groups or playgroups?

9. How much do you go to websites or sign-up for listservs where people post or share videos, comments, articles, questions, links, etc such as blogs, facebook, yahoo answers, twitter, myspace, etc?

   PROBE: What websites do you go to?

   FOLLOW-UP: What do you do on those types of websites?

   FOLLOW-UP: What elements of the site do you like?

   PROBE (if not mentioned): Does this include interacting with people you might not know personally?

   PROBE: Any parenting websites? Such as Babycenter, What to Expect, the Nest?

   PROBE: Any local websites? Such as Rochester mommies, Rochester Moms Like Me, Holistic Moms? If so, what features of those sites do you use?

10. Would you be interested in interacting with other new mothers from Rochester online?

    FOLLOW-UP: How would you like to interact? (Facebook, Discussion groups, Meet-up groups, Resource sharing, Direct contact, Reading blogs or watching videos)?

    PROBE: Emotional, information, esteem, network support

Do you think you could receive advice that is useful from other Rochester moms online?

What type of information would you want to share with other women?

Do you think you could find women that may understand your private worries and feelings in an online community?

What about anonymity?

Do you think you could find women online who you'd enjoy spending time with?

FOLLOW-UP: How would you like to find women that you might like to interact with?

For the following questions, imagine you are designing a website for use by new mothers during the first year and a half of their child's life:

11. What information topics pertaining to young mothers do you think would be helpful?

12. What types of web-based activities would be helpful on such a website and keep you coming back?

13. How often would and/or could you visit such a website?

14. What would keep you from using such a site?

Question #	2	3	4	5	6	7	8 and 8a	8b
Focus Group B	Diet quality	Experience		Baby's health/growth	Info source	Personal comfort	Doc wt recs	Wt loss att--difficulty
Focus Group B	Dietary restraint	Facilitated group		Mother baby connection	Doctor att	Dietary restraint	Partner influence	Wt gain att--permission
Focus Group B	Eat for baby	Social support		Wt gain belief--Inevitability	Experience-differences in experience		Experience	
Focus Group B	Eat what you want	Info source		Diet quality	Level of concern	Exercise	Trust info	Wt loss att--permission
Focus Group B	Health issues	Info seeking		Eat for baby	Trust info	Wt gain att-body image	Info source	Wt gain belief--rate of gain
Focus Group B	Smoking	Level of familiarity		SOC-Level of change				
Focus Group B	Social influence			Cravings				
Focus Group B								

Question #	2	3	4	5	6	7	8 and 8a	8b
Focus Group D	Age of 1st pregnancy	Parental responsibilities	Diet changes	Baby's health	Cravings		Smoking	Social influence
Focus Group D	Diet quality	Experience	Health issues	Mother baby connection	Info source		Doc wt recs	Experience
Focus Group D	Intendedness	Face to face	Cravings	Eat for baby	Trust info		Wt gain att--permission	Doc recs
Focus Group D	Parental Responsibilities		Level of concern	Wt loss att--body image	Exercise			Wt gain belief--Control/Autonomy
Focus Group D				Dietary restraint	Health topics			Diet quality
Focus Group D				Cravings	Doc wt recs			Diet preferences/attitudes
Focus Group D				Diet quality	Social influence			
Focus Group D					Personal comfort			
Focus Group D								

Question #	2	3	4	5	6	7	8 and 8a	8b
Focus Group E	Age of 1st pregnancy	Experience-differences in experience	Smoking	Baby's health/growth	Info seeking	Dietary restraint	Diet quality	Experience
Focus Group E	Breastfeeding	Facilitated group	Baby's health/growth	Smoking	Experience	Doc wt recs	Diet changes	Personal comfort
Focus Group E	Daycare	Existing program	Parental responsibilities	Age of 1st pregnancy	Preg beliefs	Preg Illness	Health issues	Social perception
Focus Group E	Experience	Parental responsibilities	Level of concern	Parental responsibilities	Info source	Weight loss in pregnancy	Experience	Eat for baby
Focus Group E	Parental Responsibilities	Feeling normal	Existing programs	Cold turkey	Labor and Delivery	Personal comfort	Info sources	Wt gain att-body image
Focus Group E		Level of concern	Intendedness	Lack of knowledge		Wt gain att--to be lost	Wt gain belief--Control/Autonomy	
Focus Group E		Intendedness	Health issues	Intendedness	Existing programs	Wt gain att--purposeful	Partner influence	
Focus Group E				Stage of change				
Focus Group E		Weight loss in pregnancy		Control/Autonomy of health		Diet preferences/ attitudes	Weight loss in pregnancy	
Focus Group E		Info seeking		Behavior change		Eat what you want	Doc wt recs	

Question #	2	3	4	5	6	7	8 and 8a	8b
Focus Group E								
Focus Group F	Baby's health			Stress	Stress		Health vs weight	
Focus Group F	Diet quality		Parental responsibilities	Smoking	Diet quality		Weight att	
Focus Group F	Exercise			Eat for baby			Level of concern	
Focus Group F	Obese att		High prioritiy	Diet quality	Info source		Info source	
Focus Group F	Parental responsibilities						Experiences--differences	
Focus Group F	Smoking			Social influence	Mental health		Weight loss in pregnancy	
Focus Group F	Social influences			Drinking	Weight loss in pregnancy		Comfort zone	
Focus Group F	Weight att		Baby's health	Exercise	Existing programs		Obese att	

Question #	2	3	4	5	6	7	8 and 8a	8b
Focus Group F							Wt gain belief--Control/Autonomy	
Focus Group F							Wt gain att--purposeful	
Focus Group F								
Focus Group I	Experience	Emotional eating	Excessive GWG	Health numbers	Info source		Doc wt recs	Experience--Differences
Focus Group I	Parental Responsibilities	Level of interaction	Health effects from pregnancy	Health vs. weight	Trust info		Wt gain att--Lot of weight	Info source
Focus Group I	Social influence	Parental responsibilities	Obesity att--health vs. weight	Holistic health				Trust info
Focus Group I		Stress		Smoking				Wt gain belief--Control/Autonomy
Focus Group I								
Focus Group I								

Question #	8c	8d	9	9a	9b	10	11	12
Focus Group B		Info source	Partner influence	Dietary restraint	PA changes	Drinking	Info source	Social influence
Focus Group B		Eat what you want	Info source	Cravings	Social support	Cold Turkey	Body image	Comfort zone
Focus Group B			Wt gain belief--fluid retention	Diet changes	Personal comfort	Time	Eat for baby	School responsibilities
Focus Group B		Wt gain belief--Control/Autonomy	Eat what you want	Wt gain belief--Control/Autonomy	Time	Health Issues	Baby's health/growth	Time
Focus Group B		Experience	Wt gain belief--Control/Autonomy of wt gain	Pregnancy illness	Energy-Fatigue	Smoking	Health issues	Parental responsibilities
Focus Group B			Experience	Diet quality		Weight Loss	Social support	Energy-Lazy
Focus Group B						Diet changes	Parental responsibilities	
Focus Group B						Exercise		

Question #	8c	8d	9	9a	9b	10	11	12
Focus Group D	Level of concern	Breastfeeding strategy	Exercise	Diet intake	Wt gain belief--exercise effects	Smoking	Baby's health	Social comparison
Focus Group D	Wt gain att--level of difficulty	Wt loss att--body image	Diet quality	Diet quality	Exercise beliefs	Drinking	Smoking	Baby's health
Focus Group D	Wt gain belief--Control/Autonomy	Level of concern	Stage of change	Dietary restraint		Breastfeeding	Existing program	Social support
Focus Group D	Wt gain belief--Rate of gain	Wt gain att--level of difficulty	Personal comfort	Pregnancy illness		Finances	Social influence	Smoking
Focus Group D		Wt gain att--to be lost		Stage of change		Cold Turkey	Control/autonomy of health	Drinking
Focus Group D		Breastfeeding		Exercise		Baby's health		
Focus Group D		Control/autonomy of health		Diet changes		Education		
Focus Group D						Existing programs		
Focus Group D						Stage of change		

Question #	8c	8d	9	9a	9b	10	11	12
Focus Group E	Diet intake				Exercise beliefs			
Focus Group E	Cravings				PA changes			
Focus Group E	Do what you need to				Energy			
Focus Group E	Diet quality				Exercise			
Focus Group E	Eat what you want				Environment			
Focus Group E	Finances				Experience			
Focus Group E	Emotional eating				Health effects from pregnancy			
Focus Group E					Intendedness			
Focus Group E								
Focus Group E								

Question #	8c	8d	9	9a	9b	10	11	12
Focus Group E								
Focus Group F	Time		Wt gain belief--Control/Autonomy		Health vs. weight			Diet changes
Focus Group F	Wt gain att--purposeful		Social support		Control/Autonomy of health		Eat for baby	Lack of knowledge
Focus Group F	Exercise							
Focus Group F	Level of concern		Emotional eating		Wt gain belief--exercise effects		Diet quality	Environment
Focus Group F	Trust info							
Focus Group F	Weight att		Diet habits		Diet quality		Diet changes	Partner influence
Focus Group F	Obese att		Exercise		Diet intake		Baby's health/growth	Dietary restraint
Focus Group F	Weight loss in pregnancy		Mental health		Exercise beliefs		Weight loss in pregnancy	Social influences

Question #	8c	8d	9	9a	9b	10	11	12
Focus Group F	Wt gain belief--Control/Autonomy							
Focus Group F	Baby's health							
Focus Group F	Control/Autonomy of health							
Focus Group I	Level of concern	Wt gain att--to be lost	Diet habits	Diet habits	Active transport	Diet quality	Body image	Diet habits
Focus Group I	Wt gain att--hard to accept	Wt gain belief--Control/Autonomy	Diet quality	Health vs weight	Energy--tired	Weight loss	Social influence	Environment
Focus Group I	Wt gain att--lot of weight		Environment	Sleep	Exercise beliefs			Health issues
Focus Group I	Wt gain belief--Control/Autonomy			Wt gain belief--Control/Autonomy	Pregnancy illness			
Focus Group I	Wt loss att--difficulty							
Focus Group I								

Question #	13	13a	13b	13c	13d	13e	13f	14a
Focus Group B	Social support	Body image	Personal comfort	Information attitude	Smoking	Time	Food as reward	Reminder
Focus Group B	Level of difficulty	Social support		Trust info	School responsibilities	Food as reward	Baby's health/growth	Kid friendly
Focus Group B	Diet preferences/ attitudes	Wt loss att-- level of difficulty			Level of usefulness		Achievement of goal	
Focus Group B	Stage of change	Personal comfort			Baby's health/growth	Maintenance of behavior	Personal health	Parenting style
Focus Group B	Major incident	Social perceptions		Experience	Parental responsibilities	Social support	Relaxation as reward	Do what you need to do
Focus Group B		Obesity att						
Focus Group B								
Focus Group B								

Question #	13	13a	13b	13c	13d	13e	13f	14a
Focus Group D	Finances	Info source						Breastfeeding
Focus Group D	Control/autonomy of health	Goal setting						Level of usefulness
Focus Group D	Goal setting	Cold turkey						
Focus Group D	Existing programs							
Focus Group D	Age at 1st pregnancy							
Focus Group D								
Focus Group D								
Focus Group D								
Focus Group D								

Question #	13	13a	13b	13c	13d	13e	13f	14a
Focus Group E								Diet preferences/ attitudes
Focus Group E								Stage of change
Focus Group E								Kid friendly
Focus Group E								Preg illness
Focus Group E								Existing programs
Focus Group E								
Focus Group E								
Focus Group E								
Focus Group E								
Focus Group E								

Question #	13	13a	13b	13c	13d	13e	13f	14a
Focus Group E								
Focus Group F	Education							
Focus Group F	Baby's health	Existing program					Mental health	Level of usefulness
Focus Group F	Existing programs							
Focus Group F	Preg illness	Social support					Food as reward	Level of detail
Focus Group F	Parental responsibilities							
Focus Group F	Partner influence	Level of concern					Discipline	
Focus Group F	Social support	Weight loss in pregnancy					Existing programs	Tech resource
Focus Group F	Diet quality	Facilitated group					Fun activities as reward	Info source

Question #	13	13a	13b	13c	13d	13e	13f	14a
Focus Group F								
Focus Group F								
Focus Group F								
Focus Group I	Diet supplement	Level of interaction		Quality of story	Diet habits	Social network	Environment	Diet attitude/preferences
Focus Group I		Social influence		Trust info	Drinking		Smoking as reward	Diet habits
Focus Group I					Environment			
Focus Group I					Finances			
Focus Group I					Pregnancy illness			
Focus Group I					Smoking			

Question #	14b	14c	15	16	16a	17	17a	17b
Focus Group B	Level of detail	Dietary intake	Baby weight	Info seeking				
Focus Group B	Energy	Partner influence	Facilitated group	Experience				
Focus Group B	Experience--differences	Determinants of useful tips	Baby's health/growth	Trust info				
Focus Group B	Stage of change	Social influence	Wt gain att-to be lost	Info source				
Focus Group B	Trust info	Time	Level of difficulty	Facilitated group				
Focus Group B		Level of usefulness	Wt gain belief--Control/Autonomy of wt gian	Tech resources				
Focus Group B			Level of usefulness					
Focus Group B								

Question #	14b	14c	15	16	16a	17	17a	17b
Focus Group D	Stage of change	Stage of change	Tech resources	Parental responsibilities				
Focus Group D	Level of usefulness	Level of usefulness	Level of usefulness	Breastfeeding	Tech resources			
Focus Group D	Trust info	Diet changes	Ease of use					
Focus Group D	Experience	Experience						
Focus Group D	Level of detail	Relaxation as reward						
Focus Group D								
Focus Group D								
Focus Group D								
Focus Group D								

Question #	14b	14c	15	16	16a	17	17a	17b
Focus Group E	Existing programs	Diet quality						
Focus Group E	Finances	Cravings						
Focus Group E	Breastfeeding strategy	Baby's health						
Focus Group E	Partner influence	Diet changes	Level of usefulness					
Focus Group E	Breastfeeding							
Focus Group E	Diet quality							
Focus Group E	Doc wt recs							
Focus Group E	Labor and Delivery							
Focus Group E	Level of usefulness							
Focus Group E	Trust info							

Question #	14b	14c	15	16	16a	17	17a	17b
Focus Group E	Wt loss att--level of difficulty							
Focus Group F	Experience	Existing programs		Face to face				
Focus Group F	Social support	Environment	Diet changes	Exercise				
Focus Group F		Level of usefulness		Existing programs				
Focus Group F	Age at 1st pregnancy	Exercise	Existing programs	Ease of use	Ease of use			
Focus Group F		Time						
Focus Group F	Labor and Delivery	Mental health		Social support				
Focus Group F	Trust info	Stress		Finances				
Focus Group F	Behavior change	Exercise preferences	Wt gain belief--rate of gain	Local	Choice			

Question #	14b	14c	15	16	16a	17	17a	17b
Focus Group F		Finances						
Focus Group F		Level of detail						
Focus Group F		Tech resources						
Focus Group I	Experiences--differences	Level of usefulness	Level of usefulness					
Focus Group I			Wt gain att--difficulty	Level of usefulness				
Focus Group I			Wt loss att--difficulty					
Focus Group I								
Focus Group I								
Focus Group I								

	Priorities Since Baby								
A	Harder with 2nd child	Easier with 2nd child	Turned life around	Drug abuse	More focused	Support	Family pleasing to focus on me and baby	More trouble	Easier with 2nd child due to new baby daddy
B	Unintended pregnancy	Short pregnancy interval	Crazier	Expensive	Loss of social life	Grow up quick	Self-focused to baby focused	Family support	Dealing with a lot of things
D	Crazier	Self-focused to baby focused	Depressing but great	Worry about sibling relationships/ other children					
E	Fatigue	Fun experience	Loss of social life	Self-focused to baby focused	Depressing	Harder with multiple children	Lack of father support	Safety	Health
F	Thought it would be easier	Fun at times	Daycare worries	Loss of independenc e	Self-focused to baby focused	Everything changes	Loss of social life	Long pregnancy interval	Depression

				Priorities as baby ages					
A	Grow up quick			Pressure to get settled	Still baby-focused	Now focus on body			
B	Weather as barrier	Busy	Worry about sibling relationships/ other children						
D				Less to do	Only keep from getting hurt	Children misbehaving			
E	Worry about sibling relationships/ other children	Children misbehaving	Loss of independence						
F	Not working			Learn to relax	Relax about diet	Relax about growth	Only keep from getting hurt	Worry about sibling relationships/ other children	Walking

A			Last place	Time as barrier	School and work as barrier	Not eating much	Focus on baby's health	Lazy	Use baby as excuse
B			Baby > Me	Fatigue as barrier	Lazy	Time as barrier	Busy	Don't feel like doing anything	Hard with multiple kids
D			50/50-some days nothing, some days energetic	To be there	Go to doc appts	Overwhelming dealing with hers and mine	Baby>me	Personal health inconvenient	Lack of childcare as barrier
E			Health is poor	Smoking	Drinking	Go to doc appts	Stopped drinking alcohol	Healthy Start	Not eating much
F	Daycare worries	Going back to work	Kids, finances, personal health	Depends on babies needs	Higher after baby	Go to doc appts	To be caretaker		

	Where does health fit in								
A	Lucky if kept shape	Walking>healthy eating	Eat whatever I want	Have to get better to be caretaker					
B									
D	Don't cook much								
E	Time as barrier	Prep time as barrier	Convenient food better	School as barrier	Lack of father support	Picky eater	Child disabilities	I eat first	Lack of childcare as barrier
F									

		Major health priorities							
A		Eating healthy food	Healthy eating easier than PA	PA>healthy eating	Overeating healthy foods	Love thin body image	Always love PA	Excessive GWG	Walking>healthy eating
B		Dental health	Lack of childcare as barrier	Fear of dentist	Mental health (anger issues, other)	Transportation as barrier	Back pain	Avoid doc appts	No start contraception
D		Dysplasia	Healthy eating	Exercise	Mental health to be caretaker	Diabetes worry			
E	Don't cook much	Sleep	Eating due to excessive GWG	Rapid weight loss	Avoid unhealthy foods for baby	Mental health--depression	Grandfather support	Mental health to be caretaker	
F		Healthy eating due to Bfing	Enough iron	Mental health--depression	To be caretaker	Diet, not doing but would like	Exercise, not doing but would like	Quit smoking, not doing but would like	

	Health priorities-baby					dealt with	When dealt wi		
A	Healthy eating	Baby food not table foods	Other people feed baby differently	Fear about choking	Junk food double standard	After recovery-1 month	4-6 weeks	Household chore early on	1-2 months
B	Keep warm	Dental health	Getting shots	Child doc appt > Personal doc appt	Sickness cycle				
D	Child doc appt	Fix any problems	Depends on child, some more sick than others			Go to doc appt	Start contraceptio n	Healthy, no ailments	
E	Good growth	Depends on child, some more sick than others	Child doc appt	Cleanliness	Healthy eating	Still in therapy to be caretake	Father support	Sleep	Sleep light to be alert
F	Child doc appt	Healthy eating	Encourage learning and development	Avoid illness	Avoid smoke	Transporatio n as barrier	Healthy, no ailments	Lack of support as barrier	Winter weather as barrier

	th?								Pregnanc
A	(not really answering question)		Father support	Worse diet in pregnancy	Cravings	Ate whatever	Vitamins	Walking	Quit smoking
B			Never smoked	Quit smoking	Quit smoking pot	Quit drinking	Search for good birth control	Can't quit sex	Short pregnancy interval
D			Weight Watchers-Dieting	Cleansing fast Dieting	No changes in pregnancy	Lazy	Ate whatever	Always skinny, wanted to gain weight	Lost baby weight quickly
E			Walking as transportatio n	Stopped smoking	Ate whatever	No exercise	No sleep	Healthy Start	Weight loss during pregnancy so visited nutritionist
F	Walking with child in good weather	Go to doc appt	Quit smoking	Quit drinking	No changes	Never smoked	Never drank	Quit working due to illness	

	y changes								Still d
A	Reduce smoking	Quit drugs	Turned life around					Brought cigarettes to hospital	Resumed smoking
B	Father incarcerated	Forget birth control	Healthy eating--baked foods	Walking as transportation	Weight loss in pregnancy	Active person	They want us		
D	Healthy eating	GDM	Stopped drinking	Still smoked				Kept eating a lot until 4-5 months pp	Lost baby weight within week
E	Quit soda	Stopped smoking	Nothing	Mostly healthy, sometimes ate junk	Lazy, couch potato	No motivation for anything			
F								Resumed smoking	

	oing?		Importance of healthy eating						
A	Resumed drinking	No drugs	Very important, but not doing	Time as barrier	Resources as barrier	Always on go	Fast food convenient		
B			Not important b/c active	Winter weather as barrier	PA>healthy eating	Eat what you want-- pregnancy	Family support	Worry about kids weight	Not eating much
D	Healthy eating try	Diabetes worry	Very important						
E			Not important	Frying vs. baking	Love junk food	Losing weight no matter what	Trying to survive		
F			Very important, but not doing it	Important, eating enough	Important, sorta				

				Reasons for healthy eating					
A				To be there	Family history of chronic disease	Body image=happiness	Eating correlates to feeling, energy	To be caretaker	
B	Kids healthy eating important	Like vegetables with high fat toppings	Food insecurity--meal patterns	Worry about kids weight	Kids healthy eating important	Frying vs. baking			
D				To be there	Weight maintenance	Parent as model	Food environment	Eating correlates to feeling, energy	Pregnancy and breastfeeding
E				Eating correlates to feeling, energy	To be there	Self-esteem			
F				Parent as model	Eating correlates to feeling, energy	To be there	Vitamins		

		Diet changes since baby?							
A		Not eating much	Miss eating a lot	Can't afford healthy food	No regular meals	Depends on metabolism	Ate whatever/a lot	Food environment	Cravings at end of pregnancy
B									
D	They tell us								
E		Stopped cooking	More take-out						
F		No changes	Eat when baby sleeping						

					Difficult to eat healthy				
A	Frying vs. baking	Pica	Pregnancy illness	Missed fast food/forbidden foods	Just want to eat	Don't have to avoid dangerous foods	Stress, sadness	Fast food/restaurant tastes good	People stopped watching your diet
B					Busy	Childcare as barrier	Food insecurity	Fatigue as barrier	Prep time as barrier
D					Food environment	Time as barrier	Work as barrier	Fast food is convenient	Childcare as barrier
E					Nothing	Time as barrier	Parent as picky eater	Dislike vegetables	Finances as barrier
F					Time as barrier	Transportation as barrier	Food environment	Finances as barrier	Kids healthy eating important

			Easier to eat healthy						
A	Missed forbidden foods		Healthier restaurants						
B	Fast food is convenient	Desire something quick	Childcare	Re-arrange schedule	Personal time	Meal planning	Work as barrier	Lack of support	Chasing kids as exercise
D	Prep time as barrier		Family making healthy meals for you	Meal planning	More time	Household food environment			Very important
E	Kids healthy eating important	Parent as disciplinarian vs. model	Personal chef	Childcare					Important
F	Household food environment	Food insecurity	Transportation	Tangible support	Food stamps	Food environment as barrier	Available healthy food		Very important

	Importance of PA						Reasons		
A									
B	Important for weight maintenance	Important for function	Childcare as barrier	Like sports	Inexpensive strategies		Health	Brain function	Heart health
D	Child misbehavior	Time as barrier	Work as barrier				To be caretaker	PA correlates to feeling/energy	Safety
E	Chasing as exercise	Household activities as exercise	Walking as transportation	No structured exercise	Not important, losing weight no matter what	Not important Body image ok	Physical comfort	Heart health	To be caretaker
F	Paying for exercise is injustice	Chasing kids as exercise	Important but not important	Ailments as barrier			Weight loss	Physical comfort	Prevent chronic disease

			PA changes since baby						
A			Still walk a lot	On bed rest	Stopped walking after pregnancy	Lazier in pregnancy			
B	Parent as picky eater	Love vegetables	Lazier in pregnancy	Fatigue as barrier in pregnancy	Energy returned after birth	No change	Still walking	Still household activities	Lack of father support
D	Child development		No energy in pregnancy	Depression	No energy after pregnancy	Energy returned after depression	Chasing kids as exercise	More active after pregnancy	
E	Child misbehavior		Always active	Stopped walking after pregnancy	Walking less	Never very active			
F	Parent as model		Stopped walking after pregnancy	Caretaking as exercise					

				Difficult to PA					
A				Makes you hungry	Laziness	Winter weather not a barrier	Body image in summer	No motivation	No support
B	Healthy Start	Still tired	Chasing kids as exercise	Time as barrier	Childcare as barrier	Busy	Weather as barrier	Fatigue as barrier	Food insecurity
D				Childcare as barrier	Lack of father support	Fatigue as barrier	Lack of knowledge as barrier		
E				Childcare as barrier	Weight as barrier	Child disabilities	Busy	Fatigue as barrier	
F				Winter weather as barrier	Childcare as barrier	Finances as barrier	Inconvenient	Worry about child illness	Time as barrier

		Easier to PA					Feeli		
A	Finances as barrier	Social support	Available resources	More time	Childcare	Exercise with child strategies	Dislike	Hard to wear clothes	PPWL hard
B		Good weather	Don't know				Weight loss in pregnancy	Inadequate weight gain	Walking a lot
D		Tangible support	Good weather	Father support			Lose baby weight quickly	Excessive weight gain	PPWL hard
E		Specialized resources for mothers	They tell us	Childcare	Affordable resources	Father support	Dislike body image	Inadequate weight gain	Excessive weight gain
F		Find employment	Transportation	More time	Tangible, not financial, support	Work as barrier	Dislike	Inadequate weight gain	All baby

	ngs about GWG?								Feelings abou
A	Miss body image	Stomach bigger			Haven't lost all the weight	Weight distribution different	Still look pregnant		
B	Doctor upset if inadequate				Haven't lost all the weight	4-5 months to lose	Different for each pregnancy	Inadequate weight gain , lost weight quickly	Lost weight quickly
D	Depression	Ok since losing ok			Lost weight quickly	Missed extra weight	Want to lose more	Fit into clothes	
E	Sad	Not eating much	No vitamins	Doctor upset if inadequate	Loose skin	Weight distribution different	Losing weight rapidly	Feel ok	Like extra weight
F	Liked extra weight	PPWL is hard	Depression	Different from first pregnancies	Lost weight quickly	PP weight gain	Buy new clothes	Nature of motherhood	Depressing

	t wt changes?					Influences weight c			
A									
B	Excessive weight gain	Ate whatever and a lot	Appropriate weight gain, lost weight quickly			Don't care	Like body image	Frame of mind/motivation	
D						Motivation to fit in clothes	Doc warn of health risks	Chasing kids as exercise	Financial resources--get a trainer
E	Bigger = healthier	Like weight loss	PP weight gain	Dislike being obese	Genes	Stress, depression causes weight loss	Suicide	Birth control	Summer body image as motivation
F	Haven't lost all the weight					Stress	No motivation	Mood	Self-esteem

	hanges?			Importance of PPWL?					Importanc
A				Very important	Get my mind right	Body image			Quality time with kids
B				Don't care, but don't want to be huge	Don't care, will come off eventually	Don't care			
D	Support/motivation to exercise			Important, health risks	To be there	Don't care	Confident body image	Nature of motherhood	Important
E	Mood swings	Chase kids as exercise	Unhealthy eating	Not important, like extra weight	Losing weight no matter what	Cultural preferences for sex appeal	Mental health		Group diets
F	Support			Very important	Don't care,Inadequate weight gain	Important, but hard	Time as barrier	Nature of motherhood	Very important

	ce of PPWL to women		How long to lose weight						
A	50/50	Dislike but can wait	9 months	Depends on personal motivation	3 months				Bender ball for crunches
B			1 month	Depends on exercise	Celebrities				Walking
D	Group diets	Genes	1-1.5 years	1 year	8 months	Different for everyone	When baby more active		Gradual food switches
E	Like weight, dislike stomach	Dislike exercise	2 months	3 months	6 months didn't happen	1 month	2 weeks	To lose baby gut	Walking
F	Who wouldn't?	Body image	Different for everyone	1-1.5 years	Finding routine	1 year +			Exercise

	Effective strategies								
A	Miss 6 pack	Walking with kid	Exercises with kid	Ab Rocket	Calistenics	Depends on motivation	Diet foods	Cook dinner	Fast food is convenient
B	Rollerblade	Walking with kids	Playing with kids						
D	Low fat milk	Water instead of juice/pop	Frying vs. baking	Depends on motivation	Work out video	Dieting	Healthy eating for breastfeeding		
E	Swimming	Breastfeeding	Exercise	Healthy eating	Sex	Birth control issues	Short pregnancy intervals		
F	Walking with kids in good weather	Make yourself a priority	Appropriate weight gain in pregnancy	Stop thinking about it					

				When to start?				Hov	
A	Family as barrier	Food insecurity	Eat more fresh foods					Immediately	During pregnancy
B								4-6 weeks	Finding routine
D				Depends on recovery, 2 weeks	Right away			Immediately	During pregnancy
E				Depends on recovery, 6 weeks				1 week	Immediately
F				Depends on recovery	6 weeks to 2 months	Healthy eating right away	Time as barrier	Immediately	During pregnancy

	v long website?			Email/Text					
A	No computer			Email>text	Text>email	Depend on plan		1x week	Depends on who sends text
B	Don't have to worry about minutes			Email>cell	Cell>Computer			1-3x every 2 weeks	1x week
D	1 month after	Depends of usefulness	2 weeks	Text>computer	Depends of usefulness			Daily if interesting	Babycenter emails
E	When get internet	Dislike Text for Baby	6 weeks	Cell>computer	Email	Depends on plan	Computer>cell	1-2x week	Text 1x day if useful
F	Borrow relative's computer			Email>text	Can save emails	Text>email		Whenever have question	1-2x week

	How often?				Social n				
A	Text 1x week	Email >1x week	Email as much as want		Like online	Like face to face	Skype	Blog	Chatroom
B	Borrow computer	Email>text			Like online	Advice	Depends on people	Someone to talk to with kids	Like Facebook
D	1x reminder email	Text >1x week	Text Q and A	Depends on who sends text--real person	Builds community	Stops violence	Stops infanticide (baby shaking)	Available 24/7	Helps overwhelmed parents
E	Only useful stuff in text				Prefer face to face	Like online too	No transportation needed	Computer illiterate	Like Facebook
F	Reminder emails, Babycenter email	Text 1-2x week	Email 1-2x week		To find resources	Café Mom user	Like resource sharing	Like Meetup if convenient	Blog ok

	etwork?								
A	Email	Facebook	Meetup at Science Musesum	Low income parent resources	Shelters, food pantries	Childcare support info	Exercise with children	Activities to do with children	Child development
B	Like Meetup	General agreement				Don't know			
D	Meetup interesting	Child misbehaving	Like resource sharing			Advice from other mothers	Daily tips	Married mom content--dealing with husbands	
E	Like Meetup	Like Resource sharing	Dislike blog	Like blog		Baby games	Survey incentives	Child illnesses	Time management
F						Advice	Finding resources	Educational resources	Q and A, advice from other mothers

	Other tools						
A	Maternal development	Baby products	Single mom content	Programs			
B							
D							
E	Daycare alternatives	Exercise how-to	Advice column	Finding resources	Q and A	Managing relationships when have kids	Smoking help
F	Child development	Child illnesses	Product reviews	Women support activities	Child feeding	Time management	

Subject	Length	Zipcode	Recruitment Source	Income	Age	Race	BMI	# Children	Age of Toddler/Infant	Age of Other Children
1	20	14608	Child Care Council	Low	32	African American	Overweight	2	7 months	13 years old
2	20	14621	Highland Family	Low	26	African American	Overweight/ Obese	2	10 months	3 years old
4	24	14606	Highland Family	Low	18	African American	Overweight/ Obese	1	19 months	
5	23	14621	AC-6	Low	23	African American	Overweight/ Obese	3	12 months	2 years old, 3 years old
6	23	14616	Highland Family	Low	22	African American	Normal	2	10 months	19 months
7	30	14616	Highland Family	Low	29	White	Obese	2	16 months	3 years old
8	18	14620	Highland Family	Low	32	African American	Normal/Over weight	2	4 weeks old	14 years old

Subject	SS1	SS2	SS3	SS4	SS5	SS6	SS7	SS8	SS9	SS10	SS11	SS12	#2-Going Through Same Thing
1	3	3	4	3	3	1	1	4	1	4	3	1	yes
2	7	6	7	5	5	6	6	1	6	7	3	6	Yes, sister has twins& need help
4	7	7	5	4	7	4	2	4	4	7	7	4	Yes, exp. Terrible twos
5	5	6	4	3	6	7	8	5	7	5	4	6	Yes, 3 kids=3x the trouble, changing diapers, bathing them all, feeding them all plus dealing with depression
6	6	6	6	6	6	3	3	3	3	7	5	2	Sister has 1 mo old; friend has 18 mos old
7	6	6	3	3	7	5	5	5	6	7	4	6	Yes a lot of friends with kids the same age, going through potty training and 12-14 month transition in attitutde
8	1	7	7	7	5	7	7	7	7	7	7	7	Niece has a 3 mos old

Subject	#3-Who rely on with things mentioned in #2	#3A-day-to-day things	#3B-advice	#3C-Private worries	#3D-Fun things
1	Bethany house: serves needs of homeless women	Nobody	Bethany House, Her aunt	Old counselor	her kids, she's a loaner
2	Mother, kids' father sometimes	Kids' father	Mother	Uncle's girlfriend	Kids & sometimes family
4	Maybe mom, group home, family, boyfriend	Group home, self	Boyfriend, mom, group home	boyfriend, mom, group home	boyfriend, mom, group home
5	Mom and sister	Grandmother, mom and counselor	Sister	Sister	Sister and baby father
6	Mainly baby father--watches kids; grandmother	Kids' father; kids, self	Sometimes kids' father or sister	Kids' father, sister, mom, 2 close friends	Kids, boyfriend--she works a lot
7	husband, but also a few close friends to talk about parenting issues	husband	sometimes mom, sometimes aunt, husband and friends for parenting	husband and close friend	kids, husband, sometimes friends away from kids
8	Child's father, her sister, girlfriend, neighbors	Neighbors	Everybody	Friend, family, neighbors(not b.father, he doesn't understand, too old, 60	Children

Subject	#4-Encourage Eat Well	#5-Discourage eat well	#6-Encourage PA
1	They don't	Belittle her for what she tries to eat, bring up her past	her doctor and now she is doing zumba at oasis because she was feeling fat after her c-section
2	Kids' father cooks to help out; doesn't eat well	Grandmother has tempting junk food	Nobody; she wants to do it but not encouraged
4	Eating isn't healthy; people make fun of eating	Make it hard on self; mom & environ. Tv commercials; group home, brothers, family & friends	See others working out
5	sister, cause some days her sister will force her to eat	people telling her that things she thinks are healthy aren't healthy and that her brother always teases	sister, because they walk around together and pushes her to go into basement to exercise using bikes, pilates or videos
6	Boyfriend does cooking , makes snacks/food	Fastfood, restaurant, big feast, herself b/c of her choices	Kids--running around with them; appts; grocery store, boyfriend
7	works around food and so others watch what other people are eating	working around food where the smell and sight of food makes it tempting	friends have started working out together and co-workers will walk together at lunch when the weather is nicer
8	Offering food, sending plates, her neighbors	Child's father not taking her to grocery store	Tell her about events going on to get her out; DSS social worker

Subject	#7-Discourage PA	#8-Help since baby	#8A-Met new people	#8B-Where
1	No one does	Lost friends, don't go to the clubs anymore, but have made new friends at the Bethany house	Yes	Bethany House
2	They sit in front of TV; they do nothing	Grandfather gives advice; it hard to find babysitter for two kids	No	No
4	Others sitting , eating, playing vidoe games & watching TV	Motherhood;going to school; group home	Yes	All over
5	other people that say you can't do it or do it well	she gets more help now that she has kids from her grandma, sister, aunt, uncle and dad, but other friends look at her differently	Yes	At stores and mall
6	Kids--can't go places or do things	Diff support: friends have died down, going friends aren't close anymore(family & friend more distant)	Yes: co-workers; new family (boyfriend family)	New job
7	The weather makes it discouraging and so they just rent movies and stay indoors, but in nicer weather she would be taking her son out for walks	She has more offers from people to watch her kids so that she can have some alone time	Yes	co-workers, highland hospital breakfast buffet for new parents
8	Not being helpful: no ride, no childcare	Family, friends & neighbors look out for her & child; worse with child's father	Emoms Interviewer	

Subject	#8C-Joined Mom groups	#9-How often use websites	#9A-Which sites
1	No, but looking to join	Not really. Not much of a computer fan, she just got an e-mail account	Careersafe and Youtube
2	No	Facebook daily to look	Facebook
4	No, can't think of any	Doesn't look at too many things on the internet (spam)	No facebook acct.
5	Supposed to be, but not sure yet	Half of the time	Uses facebook, yahoo answers and myspace
6	No	Never, had MySpace in HS but doesn't have FB or twitter	-
7	Yes, online through Rochester mommies but hasn't been to any events	3-4 times/week	Facebook, Circle of Moms, Infamil.com (for Q&A and developmental stages)
8	Not yet but plans to	Not at all, doesn't have any of that stuff; no internet access at home	When she has access she uses FB

Subject	#9B-What you do on site	#9C-Elements You like
1	n/a	n/a
2	Read blogs, others' updates;doesn't post	Viewing pics, knowledge, what others are doing
4	Has MySpace & yahoo acct. See who is online& talk with them; look up things	New things added, it's catchy
5	Talks to friends, writes on her own page, looks at pictures, uploads kids pictures, comments on pictures	Likes finding friends and making connections with old friends
6	-	-
7	Look at pictures and status updates to see what is going in her friend's lifes. One Circle of Moms some people ask questions, she'll post suggestions, but not ask Qs, and she reads a lot on the site mainly about temper tantrums	Facebook: up to date, easy to access, it's fast Infamil: Keep track of how old your child is, sends coupons, and sends e-mail with suggestions
8	View pics of fam. She hasn't seen; shares pics	Not really; not very computer inclined; reads what posted sometimes

Subject	#9D-Interacting with strangers	#9E-Mom Websites	#9F-Local Websites	#10-Interact w/Local Moms	#10A-How to Interact	#10Ai-Facebook	#10Aii-Discussion Groups
1	n/a	no	No	Yes, if you don't have to meet	Not meeting face to face	Yes	No, might turn into a debate
2	Yes, but also keep contact with family	Yes, "What to Expect"	No	Yes	Play dates	Yes	Yes
4	Yes, chat functions	No	No	access to a computer; somethings are blocked on		Yes	Yes but no drama
5	Yes and has made friends that way	Yes, mom and baby site	No	Yes		Yes	Yes
6	-	No	No didn't know about them	Yes	To see what others are going through; chance to	-	Yes
7	Yes, because there are a lot of people on these sites that you don't know	Yes, what to expect during pregnancy and for awhile postpartum	Yes, Rochester mommies	Sure		Yes	Yes
8	No	No	No	Sure		Yes	Yes

Subject	#10Aiii-Meet-up group	#10Aiv-Resource sharing	#10Av-Direct Contact	#10Avi-Blogs/Vlogs	#10B-advice	#10C-information
1	No	Yes	Yes	No	No, because I don't like people telling me what to do	She's like other people to share information with her she has too many problems to share her information with others
2	Yes	Yes, childcare, talk about problems	Yes	video would put her to sleep	Yes	Yes, what others are going through
4	Not sure	Yes		Yes	Everyone is diff.	Depends on what they need help on or advice for
5	Yes	Yes	Yes	Yes	Yes, because it is better getting advice from other people	Even though she is raising her kids on her own she has enough love to give them for two people
6	Yes, for play group	Yes,	Yes	Yeah	Yes	Her experience, stuff she's been through, how she became a young mom
7	Yes	Yes	Yes	Yes	Yes	Techniques used for discipline and getting her son to do what he is supposed to do
8	Yes	Yes	Yes	Yes	Yes	Her day to day experiences with child

Subject	#10D-private worries	#10E-anonymity	#10F-spend time with	#10G-Find women how?
1	Yes, there is always someone out there with the same situation as you	Wouldn't want a picture of herself, just a screen name	No	Honestly, I don't get along well with other women. She doesn't trust and so it could be hard to be friends.
2	Yes b/c other moms are going through the same things	Not concerned	Yes	Yes, if they are interested in their kids
4	Don't know	In a way/in a way not	No	I don't make friends; I don't cope with female as much
5	Yes	Not really	Yes	Online, no particular characteristics
6	Yes	No, did a lot of peer education	Yes	With her kids or in groups/meeting groups, play groups, parks
7	Probably	Not really	Yes	Talks to a lot of people through work and posts to connect with other women on craigslist
8	Yes	Wouldn't mind	Yes	Doctors, internet, at the grocery store; she needs a good support system

Subject	#11-information topics	#12-web-based activities	#13-Frequency
1	Dealing with frustration, Handling your inner emotions, Learning how to better communicate with kids	Facebook and then she'd keep coming back	Everyday she's at school (5 days/week)
2	Childcare, who to trust, indoor fun/healthy kids activities	Healthy things for kids; kids safety	Everyday
4	How to be the best mom; child care approval; potty training	Messages from people to connect with	Every couple of weeks
5	Postpartum depression-she could talk about that, Show how to do things;	How to bond with the baby, how to play with the child, facebook/local resource page	everyday
6	Stress mgt, coping skills, info for new mom, typical daily things; skills, how kids grow, interaction with kids, what to do w/ your kids; postpartum depression	Stress test eva., questionnaires, child development games	1-2x/week
7	Time Management, Getting yourself on a schedule, ways to save $$ when you have kids, teething, discipline, time for yourself	Live chat for instant answers, a way for her to compile questions and then that they could be sent to her on the day of her pediatrican appointment	a few times a week
8	Feeding, diaper changing, sleeping for mom & baby	Finding new people, new comments & blogs	If could, everyday but 1/mo now

Subject	#14-Keep from using
1	The government
2	Dislike how certain things are said;tone, direction
4	-
5	Nothing because she likes the internet and is looking for new things
6	Nothing
7	if it took too long to load or was under construction or not relevant to her
8	Negative energy, comments & blogs

	Employment	Smoking	Drinking	Drug Use	Relationship	Family	Education	Health Issues
Pregnancy								
Focus Group B	Loss of job due to pregnancy complications		DUI experience	Smoking weed	Drunk partner, neglected child care; No husband support, "essentially a single mom"	Bad experience with own mother; Lack of support for household	Finishing school	
Focus Group D								
Focus Group E	Former exotic dancer	Smoking into pregnancy	Drinking into pregnancy; Partying					Fibromyalgia; Stress; Depression

	Employment	Smoking	Drinking	Drug Use	Relationship	Family	Education	Health Issues
Focus Group F		Smoking			Custody issues; Divorce	Lack of family support		Stress; Depression; Healthy because no asthma, cavities; Anger issues
Focus Group I		Smoking into pregnancy; Asthma in offspring		Smoking weed			Finishing school; Quit school	Stress
Postpartum								
Focus Group A	Work (unpaid) all day	Smoking again; Smoking in pregnancy		Overdose in pregnancy	Single motherhood; Engaged; More support from current partner	Support family members	Finishing school	Medical Issues; Stress; Sad

	Employment	Smoking	Drinking	Drug Use	Relationship	Family	Education	Health Issues
Focus Group B	Have job interview; Only babysit			Smoking weed	Engaged; Incarcerated partner; Multiple baby daddies; Lack of partner support; Custody issues	Support family members		Medical Issues; Dental health; Mental health problems; Anger issues
Focus Group D	Lack of time due to work				Lack of partner support			Medical Issues; Postpartum depression; Stress
Focus Group E		Smoking again; Smoking in pregnancy	Drinking		Multiple baby daddies; Lack of partner support; Custody issues		Boyfriend finishing school	Mental health problems; Anger issues

	Employment	Smoking	Drinking	Drug Use	Relationship	Family	Education	Health Issues
Focus Group F	Disability; Unemployment	Smoking again; Smoking in pregnancy			Single motherhood		Education	Medical Issues; Stress
Interview 1					Custody issues		Finishing school	
Interview 2								
Interview 4							Finishing school	
Interview 5								Postpartum depression
Interview 6								Postpartum depression; Stress
Interview 7					Changing status of relationship			
Interview 8					Lack of partner support			

	Healthcare	Pregnancy	Lack of support	Lack of resources	Food environment	Violence/Crime	Sex
Pregnancy							
Focus Group B	Bad relationship with health care providers	Short pregnancy interval; Delayed diagnosis of pregnancy					
Focus Group D	Trust Info	Age of 1st pregnancy; unintended pregnancy; Parental Responsibilities					
Focus Group E	Interactions with social workers	Lack of sex education knowledge; Teenage pregnancy; Concern about teenage kids getting pregnant, STDs; Parental Responsibilities					

	Healthcare	Pregnancy	Lack of support	Lack of resources	Food environment	Violence/Crime	Sex
Focus Group F	Interactions with social workers	Unintended pregnancy; Parental Responsibilities		Lack of friend support; Lack resources--no cell phone, no computer			
Focus Group I		Teenage pregnancy; Concern about teenage kids getting pregnant, STDs; Parental Responsibilities			Fast food environment; Soul food preferences	Money laundering/Criminal activity environment	
Postpartum							
Focus Group A		Short pregnancy interval	Lack of support	Lack resources--no phone, computer, diapers, furniture, clothes, formula, housing	Fast food environment		Sexy body image

	Healthcare	Pregnancy	Lack of support	Lack of resources	Food environment	Violence/Crime	Sex
Focus Group B		Birth control problems; Unintended pregnancy		Lack resources--no phone, computer, diapers, furniture, clothes, formula, housing	Fast food environment		Sex is important
Focus Group D		Birth control problems			Fast food environment	Worry about violence	
Focus Group E		Short pregnancy interval; Birth control problems; Unintended pregnancy		Lack resources--no phone, computer, diapers, furniture, clothes, formula, housing	Fast food environment		Sexy body image; Sex is important

	Healthcare	Pregnancy	Lack of support	Lack of resources	Food environment	Violence/Crime	Sex
Focus Group F			Lack of support	Lack resources--no phone, computer, diapers, furniture, clothes, formula, housing	Fast food environment		
Interview 1			Lack of support				
Interview 2						Worry about violence	
Interview 4			Lack of support				
Interview 5							
Interview 6			Lack of support				
Interview 7							
Interview 8							

	Food Insecurity	Homelessness	Appointments	Shopping	Transportation Problems	Medical Problems In Children
Pregnancy						
Focus Group B						
Focus Group D						
Focus Group E						

	Food Insecurity	Homelessness	Appointments	Shopping	Transportation Problems	Medical Problems In Children
Focus Group F						
Focus Group I						
Postpartum						
Focus Group A	Food insecurity; Not eating much; Food pantries; Food stamps	Shelters/Group Home; Stop being in streets				

	Food Insecurity	Homelessness	Appointments	Shopping	Transportation Problems	Medical Problems In Children
Focus Group B	Food insecurity; Not eating much; Food stamps	Homelessness	Appointments; Miss 6 wk appointment; Doctors appointments	Shopping	Transportation problems—bus	Asthma in children
Focus Group D			Appointments; Doctors appointments			In and out of hospital
Focus Group E	Food insecurity; Not eating much; Food stamps		Doctors appointments		Transportation problems—bus	In and out of hospital; Seizures; Child behavior problems; Pre-term; Hypoxia; Autism; Developmental Issues

	Food Insecurity	Homelessness	Appointments	Shopping	Transportation Problems	Medical Problems In Children
Focus Group F			Doctors appointments			Asthma in children
Interview 1		Shelters/Group Home				
Interview 2	Food insecurity					
Interview 4		Shelters/Group Home				
Interview 5						
Interview 6						
Interview 7						
Interview 8					Transportation problems—bus	